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Medicine

Heartburn

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For many years the symptom of heartburn was considered to be indicative of gall bladder disease. At the present time, however, most physicians attribute the symptom to irritation of the oesophagus due to reflex of gastric contents. There is no true valve at the oesophago-gastric juncture, but the normal hook up of the oesophagus to the stomach just below the diaphragm provides a valve like action that prevents reflux. The commonest disturbance of this valve like action is the hiatus hernia. This hernia may be large, or small, but the important thing is not its size but the fact that it upsets the valve like action and permits reflux. This reflux may, of course, occur without a hiatus hernia and can be seen on x-ray of the stomach if the radiologist is asked to look for it. A hiatus hernia may be shown to be present on one radiological examination but fail to be demonstrated at a subsequent one.

Symptoms that make one suspect a reflux are the occurrence of heart burn after the larger meals, on lying down after meals, or on bending over at work, such as weeding the garden. Besides the heartburn the patient may complain of regurgitation of fluid into the back of the throat. In severe cases it may give the patient trouble on going to bed, or may even wake him at night after he gets to sleep.

In addition to the heartburn the oesophageal irritation may be severe enough to produce oesophageal spasm. This may be a very disturbing and frightening symptom in this day of coronary consciousness. The spasm produces a knot like pain which is substernal and may be transmitted to the lower jaw. It may simulate coronary pain very closely and cardiograms are usually necessary before the patient, or his physician are reassured.

In the past few years, in the Gastro-Intestinal Department of Westminster Hospital, we have had considerable success with a comparatively simple treatment. Because of the well known fact that liquids won't run up hill, the patient is told not to lie down for 2 hours after a meal, to have the head of his bed raised on 4 inch blocks and to avoid bending over his work, if possible, following his meals. Also in the belief that the less liquid in the stomach, the less chance for reflux, no fluids are given with the meals or for 2 hours after. Soups, broths and stews are forbidden.

Because of the success of this treatment, we wondered if it might be of value in the common heartburn of pregnancy. We suggested its use to several of our busiest obstetricians, and I am pleased to report that they have found it of great value in controlling this troublesome symptom. One of our busiest obstetricians suffers himself from heartburn due to a hiatus hernia, and, naturally, he is an enthusiast for this management.

I also feel that no hiatus hernia should be operated upon without a trial on this type of management. It should also be remembered that a great number of hiatus hernias give no symptoms whatever, and no treatment is necessary. Unless patients have symptoms, they should not be told that they have a hiatus hernia.

Belching and Bloating

Belching and Bloating are very common gastro-intestinal symptoms. As physicians we all know that gas is never formed in the stomach, and that, although it is formed in the bowel, 75 per cent of intestinal gas is swallowed air. Ever since Wangensteen established his gastric suction, we have a practical example of this fact on all our surgical wards. Those of you who have practised over 20 years will have vivid recollections of the gas pains and the turpentine stupes of the pre Wangensteen era.

The two main causes of belching and bloating are fast eating and emotional tension. I have personal experience with bloating, and I am sure many of you are similarly afflicted. Whenever I go to a football game I know that I am going to be markedly distended before the first quarter is over. Also, in all probability, when this particular hour is over I shall have to let my belt out several notches. In both cases we know the distention is due to emotional tension. When I was a teenager, if I heard my mother belching while preparing breakfast, I knew that I had better walk warily. She was annoyed and emotionally upset, and I was invariably the reason. This relationship between emotion and tension and belching and bloating must be explained to the patient and, of course, the reason for the tension be removed if possible. Frequently this is not possible, but if the patient understands the process, he at least is reassured and does not have the same worry about organic disease.

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Fast eating is a habit and like all habits is difficult to break, but here again our dry diet is of great assistance. If the patient has no fluids to wash his food down, perforce he has to masticate more thoroughly and eat more slowly. No fluids are allowed with the meals or for 2 hours following. If at the same time the patient is given a mild sedative, such as phenobarbital grs. ½ three times a day, the great majority of belchers are brought under control, as is the accompanying distention.

On one occasion I had a striking example of the value of a dry diet in bloating. A business man came in wanting to reduce his weight. He was put on a 1500 calorie diet and it was also made dry. In one week he returned very enthusiastic. He pulled his trousers out in front and said, "Look how much weight I have lost." The scales would only allow him one pound in weight but the tape line allowed him 4 inches off his waist. One pound in weight and 4 inches in bloat.

A Common Error in Ulcer Diagnosis

One of our most common errors in gastro-intestinal medicine is to make a diagnosis of duodenal ulcer when none is present. The chief reason for this error of course is the x-ray machine and the radiologist. The patient with indigestion is sent for x-ray, and some deformity of the duodenal cap may be found. A good radiologist will report this finding and add that, if the symptoms warrant, a diagnosis of duodenal ulcer might be made. Other radiologists may merely make a diagnosis of duodenal ulcer. The laity all think, and far too many of the profession think, that an x-ray diagnosis is a fact, when in reality it is only an opinion. There are only two specialists whose opinions are taken as facts — the pathologist and the radiologist. They are only human and are subject to error the same as any other physician. It is dangerous and costly to the patient to put a diagnosis of duodenal ulcer on him merely on the basis of an x-ray plate. In about 90 per cent of cases of duodenal ulcer, the story is typical and a final year student would make the diagnosis. With this history, deformity of the duodenal cap is sufficient radiological finding to make the diagnosis. In the 10 per cent of cases which are atypical, the x-ray is helpful, but the best diagnostic method in atypical cases is trial of treatment. Put the patient on strict ulcer management. If he gets prompt and complete relief, and, if that relief lasts for a period of several months, a diagnosis of duodenal ulcer is indicated. If the relief is not prompt, or complete, or if a recurrence of symptoms occurs in a week or two, you are not dealing with a duodenal ulcer. A good example of this occurred with me very recently. A university professor was referred to me who on x-ray had shown a very deformed duodenal cap and a probable ulcer crater. His history was completely atypical. He had generalized upper abdominal distress coming on before breakfast and quite uninfluenced by his meals. On being put on ulcer management he experienced no relief from his discomfort, and, as far as I am concerned, he does not have a duodenal ulcer regardless of the x-ray opinion.

Pyloric Obstruction is by far the most common complication resulting in gastrectomy. Severe obstruction is not often missed, but early obstruction is. In severe obstruction we see a patient who has lost considerable weight, has a large dilated stomach with succussion splash, visible peristalsis and vomiting. The vomiting has 3 characteristics: The amount is large, food taken 12 - 24 hours before is seen, and it is not accompanied by nausea. Most patients will tell you that they can eat again right after vomiting. The x-ray examination will show a large 4 or 6 hour residue.

In early obstruction, however, the picture is entirely different. There is little weight loss, no visible peristalsis, rarely any vomiting and the x-ray shows no retention. The diagnosis has to be made with the history and the finding of high residual contents on aspiration of the stomach at night.

One should have a high index of suspicion of any ulcer which has been present for over five years. When obstruction occurs the typical history changes. No longer do they get the quick relief from food which is characteristic. Food may make it worse at times. I have a favourite question I ask, "What meal of the day do you enjoy the most?" The majority will reply, "Breakfast" and the reason is, of course, that that is the only time when their stomach is empty. At lunch time they still have some breakfast and at the evening meal they feel full because some breakfast and most of their lunch is still there. With this story the next step is to find out how large a residual he has 5 hours after his evening meal. Nothing to eat or drink is allowed after the evening meal and if the residual on aspiration is 6 ounces or better on 3 successive nights, the patient has early pyloric obstruction and gastrectomy is warranted.

Chlorpromazine Jaundice

In this day and age when everyone feels the need of tranquilizers, we find ourselves with a new and troublesome form of jaundice, Chlorpromazine or Largactil Jaundice. It may occur after only a few doses of the drug, or may occur only after the drug has been given for a long period of time. When we see a person with jaundice to-day, we have to inquire carefully as to what type of medication he has had over the past few months. In Chlorpromazine Jaundice, liver function tests show no evidence of liver cell damage and our chief difficulty is in differentiating it from extra hepatic obstruction, such as common duct stone or a malignant obstruction. In most cases, if the drug is discontinued the jaundice clears fairly rapidly, but

some cases may persist for several weeks or months. I know of no way of distinguishing this type of jaundice from other forms of extra hepatic obstruction other than waiting it out, or a laparotomy. I think most cases should be waited out. If the obstruction is due to stone, it is safe to wait, for, unless chills and fever develop indicating cholangitis, the liver is not harmed by obstruction over a period of 2 - 3 months. If chills and fever develop in a case of jaundice, of course laparotomy and drainage of the duct must be done. In malignant obstruction due to disease of the pancreas I am a pessimist, and feel that little is lost if the diagnosis is not made early.

We have a procedure at Westminster Hospital, in cases of jaundice that we feel has helped as a great deal. When a jaundice case, or suspected case, is admitted the nurse-in-charge puts up a urine rack beside the bed. At each urination a test tube sample is put in the rack and is there for inspection by the Interne and attending Physician. In this way any change in the urine is noted at once. It is particularly useful in cases of common duct stone. The urine will clear long before his jaundice clears, but on the other hand, if the common duct is obstructed for a short period of time, the bile will appear in the urine but the patient will not appear jaundiced. My Internes have learned never to talk to me about yellow sclera because my answer is always the same: "Show me the urine."

The same idea can be used on an out-patient basis. In obscure attacks of upper abdominal pain the patient is instructed to save each passage of urine for the next 24 hours and one specimen with bile in it is worth a hundred x-rays. The Vanderberg Test to my mind could be dispensed with, except as a measure of the amount of serum bilirubin. If he has jaundice and bile in the urine, he has obstruction somewhere, either in the liver or extra hepatic. If he has jaundice and no bile in the urine, the jaundice is haemolytic. Let our watch word be, "Keep Your Eye on the Urine."

The Normal Barium Enema

Any radiologist will tell you that the two areas in the colon in which he is most apt to miss lesions are in the caecum and the rectum and recto sigmoid juncture. We have no other method of examining the caecum except by laparotomy which I think is justifiable in suspicious cases where the enema has been carefully repeated. However, at the other end of the colon we have no excuse. We have two instruments which complement the radiologist completely. God gave one to everyone of us, and Moses should have included it in the Ten Commandments. It is the best instrument for examining the last 3 - 4 inches of the colon but we still neglect to use it. You all know the name of it because it was dinned into you in every year of your medical course. The Index Finger. It never goes out of style and never wears out. With it alone one can diagnose one-third of the carcinoma of the colon. The other instrument is the sigmoidoscope. When we are in school we are told to buy and learn to use on ophthalmoscope. The latter is, of course, a very valuable instrument, but when it comes to saving lives it does not compare with the sigmoidoscope. With the aid of the sigmoidoscope we can see clearly the dangerous area of the colon, which is from 4 - 7 inches from the anus. That area lies beyond our finger and up to the area where the radiologist can get the colon under his hand. With our finger and sigmoidoscope we can see, or feel, 75 per cent of all cancers of the colon. Every practitioner should have and learn to use the sigmoidoscope. To learn you introduce it into the rectum and keep looking. I can almost guarantee that when you see a malignant lesion you won't need any pictures to tell you what it is. If one is careful not to use force, there is practically no danger in sigmoidoscope.

To give you an idea as to how often this problem of the normal barium enema comes up, one of my surgical confreres told me that in one 5-year period of practice he had operated on 14 cases of carcinoma of the colon with a normal barium enema.

The Gastric Ulcer Problem

The older members of the audience will recall the controversies at Medical Meetings in the past regarding medical versus surgical treatment of duodenal ulcer. This is no longer a problem, as everyone now agrees that the treatment is medical unless a surgical complication arises. The controversy today concerns the treatment of gastric ulcer. Many surgeons are of the opinion that a gastric ulcer should be operated on when the diagnosis is made, because of the difficulty in distinguishing the benign ulcer from the malignant.

When Sara Jordan first brought out her criteria for distinguishing benign from malignant ulcers, there was not much argument because at that time the mortality of resection was between 10 - 20 per cent. However, in the last few years the mortality has fallen to between 2 - 5 per cent, and in our Westminster Hospital it is 1.25 per cent. Because of this low mortality we became disturbed as to whether we should continue our attempts to distinguish between benign and malignant ulcers. We ran a survey on 100 gastric ulcers seen at Westminster Hospital between 1952 - 1956 inclusive, and the results were published in the Canadian Medical Association Journal in the fall of 1956. Surgery was carried out on all patients with recurrent gastric ulcers, ulcer on the greater curvature, those with pyloric obstruction and gross hemorrhage. All others underwent 3 - 6 weeks of medical treatment in hospital. If the ulcer healed and if the patient got prompt and complete relief from distress, the ulcer was considered to be benign, and he was rechecked every 6 months for

2 years. If healing were incomplete by x-ray examination, or if the symptoms were not relieved, the patient was advised to have gastrectomy. Of the 100 cases — 30 were treated surgically, 14 because malignancy was suspected, 13 because of a recurrent ulcer and 3 because of hemorrhage. One ulcer only was found to be malignant. Of the 70 medically treated cases none had developed carcinoma in the follow-up period which lasted from 2 - 7 years.

Other reports such as that from the Lahey Clinic, showed that their error in labelling malignant ulcers is slightly less than their surgical mortality. Swynnerton and Tanner reported a 2.5 per cent of error which is as low as the average reported mortality.

Also something which the surgeon rarely mentions is the morbidity after gastric resection. We feel that there is a 10 per cent morbidity of fairly serious character. Of course, the surgeon does not have to deal with morbidity, but we Physicians do and have to take it into consideration in our decisions.

For these reasons we have continued the attempt to diagnose the benign from malignant ulcers using the Jordan criteria and believe that it is justified.

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Further Experiences in Long Term Anticoagulation

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It is the purpose of this paper to consider, very briefly, some of the experiences in the long-term anticoagulant clinic which has been conducted at Deer Lodge (Veterans) Hospital for approximately the past three years. We were motivated to start this clinic by a number of considerations. First, the experience in the treatment of acute myocardial infarction was undoubtedly satisfactory and it was considered not unreasonable to pursue anticoagulation for months, and perhaps even years. Second, although there were few carefully controlled studies, the efficacy of long-term anticoagulation seemed to be attested to by various studies by competent observers.

We have accepted the following indications for permanent anticoagulation: when there has been only one myocardial infarction permanent anticoagulation has been undertaken when this infarct was a severe one, when there was a complicated course, when there was a bad family history or when there was the onset of unremitting angina pectoris after recovery; we have routinely begun long-term anticoagulation after a second myocardial infarction; when a myocardial infarction has been followed by any further thromboembolic episodes; we have considered it reasonable to start long-term anticoagulation in the process of ethical investigation in certain cases of coronary heart disease. In the latter circumstance the patient had always been apprised of the significance of the anticoagulation and its hazards and in no case has anticoagulation been undertaken without the patient's consent.

Contra-indications to the use of this procedure have been lack of patient co-operation, increased intracranial pressure, when the blood pressure was consistently above 200/120 or when there were Grade III to IV fundi, after recent extensive surgery, when there was advanced hepatic or renal disease, blood dyscrasia with a bleeding tendency, active G.I. ulceration or active bleeding from other sites, lack of reliable laboratory facilities.

All our patients have been males. It has been our consistent aim to maintain the prothrombin time at between 20% and 30% of normal by the Quick One Stage method, using either danilone or dicumarol. Initially the patients were instructed to report frequently, but it has been found practical in certain circumstances to have the patient visit at one-month intervals. Before going on to tell you of our experiences in permanent anticoagulation I would like to emphasize that we will record few major conclusions for you at this stage. This, for a number of reasons. In the first place, our studies were uncontroiled. In the second, we believe our experience has been too short to date, since the majority of our patients have, of necessity, been followed for less than the three-year period. However, certain experience we have had, we feel, will be valuable and instructive. I will now review this experience with you.

We are thus far following 100 cases in our clinic. Of these 100 cases 20 are being strictly controlled with a double blind technique and since our experience with this group has been exceedingly short, we will not consider them further.

Second in the group of 100 cases are the non-coronary group, which consists of 19 cases. Briefly outlined the diagnosis in these cases follow:

Basilar artery insufficiency (5 cases).
Thrombophlebitis or phlebothrombosis with pulmonary emboli (2 cases).
Rheumatic heart disease with auricular fibrillation and recurrent emboli (5 cases).
Carotid artery insufficiency (4 cases).
Recurrent thrombophlebitis (2 cases).
Peripheral vascular disease (1 case).

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There remain, then, in this group of 100 cases, 61 cases of coronary artery disease who have fulfilled the previously accepted criteria and who are being followed in our long-term anticoagulant clinic at regular intervals.

Now to consider the latter group more fully. Their ages range from 28 to 81 years. Their average age is 60.4 years and the average duration of treatment has been 16.5 months. The range of treatment is from one month to six years. It is to be emphasized however that the vast majority have been treated for less than three years. Of these 61 cases, 21 have had two or more infarctions, 36 have had a single infarct, 8 have suffered from the syndrome of impending infarction and 2 have had severe angina pectoris.

It is to be noted at this time that accurate calipers do not exist for ascertaining the adequacy of control. As I have indicated, we have aimed to keep the prothrombin time between 20% and 30% of normal and it has been our impression that we have succeeded in this aim in about 80% of cases. This is, however, a very rough estimate.

At this stage I would like to consider for you the side effects which our patients have suffered. There is no doubt that very minor bleeding is often not reported and, accordingly, if one wishes to be very rigid, the incidence of side-effects is probably higher than I will indicate. Anything that a patient has seen fit to report to a doctor will be reported to you.

We have had 8 examples of gross hematuria, 3 of melena, 9 of significant hematoma of the skin. We have had 1 major retroperitoneal hemorrhage and 1 intra-cerebral hemorrhage. There have been 5 severe epistaxes and 3 subconjunctival hemorrhages, 1 case of danilone dermatitis and 1 of severe danilone diarrhoea have been a problem and there have been 3 examples of hemarthroses. In a few words, then, we have had 33 episodes of relatively minor bleeding in 61 patients treated for an average of 1 1/3 years. On the other hand, there have been 2 severe bleeding episodes, 1 ending in death, but more about that later. I think it is not unreasonable to say then that we have found permanent anticoagulation thus far to be a relatively safe procedure when ideal conditions exist.

It may be of some interest to you to hear of two patients who have presented us with unique experiences. The first patient had a benign tumour of his face operated on in error while his prothrombin time was 20% of normal. The bleeding tendency was quite marked but easily controlled by local pressure. The second case is perhaps even more interesting: A man whom we had been following for a year or so and who was well-anticoagulated, went for the winter to California. There he began to notice the onset of severe right upper quadrant pain. Unfortunately, no diagnosis was established and he returned home, still suffering the pain. A tentative diagnosis of cholecystitis was made, and he was taken to the operating room. At operation, a perforated peptic ulcer was found without much attendant blood in the peritoneal cavity. This, in spite of the fact that he was adequately anticoagulated. Neither of these cases is quoted as an example of good medical treatment, but rather to illustrate the relative safety of anticoagulation.

Next, I would like to review our experience in those patients who have died while attending our anticoagulant clinic. Of these 12 patients, 3 died of fresh coronary thromboses, 1 of intra-cerebral hemorrhage, 1 case was a suicide, 1 case was of myocardial insufficiency secondary to acute subintimal coronary hemorrhage. In 2 cases the cause of death was unknown, in 2 cases there was acute pulmonary edema, in 1 case there was metastatic gastric carcinoma and in 1 case there was a ruptured aortic aneurysm.

Let me consider some of these cases for you in more detail. We are, of course, most interested in those who died of acute coronary thrombosis. The first such patient who died of acute coronary thrombosis was in the hospital with a concomitant cerebrovascular accident and his prothrombin control was exceedingly erratic for three days before his death. The second such patient had a recent thrombosis with a third myocardial infarction.

I would like to consider the case of the third patient who died of acute coronary thrombosis in some detail, for I think you will agree that the case raises some fascinating problems. This man was a 36 year old, tall, obese male, who suffered from hypertensive heart disease, chronic nephritis, hyperchclesterolemia, bronchial asthma and had had two previous myocardial infarctions. His prothrombin times were consistently done and three weeks before his death his prothrombin time was 20%. For the four days preceding his death his prothrombin time was 15% of normal, 30% of normal and 20% of normal, and on the day of his demise it was 20% of normal. In spite of what would be considered very adequate prothrombin level, it was found at necropsy that his death was due to two acute myocardial infarctions, both right and left coronary arteries were occluded by fresh thrombi. The amazing clotting propensity of this individual, I am sure, is ill-understood and is of tremendous importance.

The three cases briefly described point out a fact which should be well-known. It is this—that when there is advanced coronary atherosclerosis, even the most meticulous anticoagulant control may fail to prevent coronary thrombosis. The other 9 cases all showed well-recanalized thrombi of the coronary arteries and with the exception of the case of subintimal hemorrhage, no death was due to recent coronary occlusion.

At this stage, I would like to say a word about impending myocardial infarctions and angina pectoris and the place of anticoagulants in their treatment. We have made a diagnosis of impending myocardial infarction in 8 patients. In each of these 8 cases anticoagulants were immediately begun and in none of them was there a subsequent myocardial infarction, as evidenced by cardiographic progression, elevated transaminase and other signs of myocardial necrosis. In reviewing these cases, it has become increasingly clear that, although the diagnosis was probably justified in 5 of them, there is no doubt that, as we have come to know our patients better, at least 3 patients suffered severe cardiac neurosis consequent upon a previous myocardial infarction and presented stories of crushing retrosternal pain of unlimited duration at almost every visit to the Clinic. We will not hesitate to use anticoagulants in the treatment of impending myocardial infarction in future patients for, in the present state of our knowledge, we believe them to be indicated. However, we would like to point out that the diagnosis is sometimes fraught with difficulty and only by careful clinical observation will a satisfactory answer ultimately be achieved.

I have already pointed out to you that coronary thrombosis may occur in what appears to be an ideal state of anticoagulation; accordingly, anticoagulants may be used in impending infarction with the hope, but not the certainty, that the infarction may be either averted or ameliorated.

I would like to mention also at this time that my experience has been that anticoagulants have no effect upon the pain of angina pectoris. This is not to say that the prognosis is unaffected by their use — the matter is undecided. However, those patients who have noted any pain relief with the use of anticoagulants (and I may say parenthetically that these are few) have attributed this relief to concomitant advice about restriction of activity and intelligent use of nitroglycerine.

Finally, I would like to mention the unmasking phenomenon which we have noted in two or three of our patients in which, although the prothrombin level is not unduly depressed, still there are bleeding tendencies. In this manner anticoagulants have unmasked previously unknown gastric carcinoma, bladder tumor and internal hemorrhoids.

Conclusions

1. Permanent anticoagulation is a relatively safe procedure when properly carried out. It is, at present, a seemingly useful albeit limited procedure.

2. Present indications are that, where indicated, it is capable of reducing mortality and morbidity from further thrombo-embolic manifestations.

3. Its final indications are not yet settled. Indications are that it may, in the long run, turn out paradoxically to be of greater use in the good-risk than in the poor-risk patient.

4. Clinical impressions are of limited value in assessing the true worth of treatment in preventing either progression of an impending infarct or reinfarction. Controlled studies are necessary. The physicians' enthusiasm, the rigors of true diagnosis, the effect of bedrest, nursing care and other drugs all play a part. We are at present in the process of carrying out what we consider to be meticulously controlled studies and some day hope to report them to you. No quick or facile answers are justified.

5. The twin scourges of atheroma and thrombosis will, no doubt, ultimately have happier solutions than the imperfect thrusts presently being made

Bacteriology

Antibiotic Sensitivity Testing of Micro-organisms using the Paper Disc Method

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The antibiotic sensitivity of micro-organisms by the paper disc method is one of the commonest carried out in hospitals nowadays. It is extremely simple and consists usually of placing a disc impregnated with antibiotic on the surface of an agar plate previously inoculated with the organism under test. The plate is incubated for a few hours and when the organism has produced a confluent growth the region around the disc is examined for the presence or absence of a circular zone of inhibition of organismal growth. The presence of such a zone is taken to indicate that the antibiotic has some inhibiting effect on the organism.

In spite of the simplicity of this test it is apparently not clearly understood and is the source of considerable disagreement. In 1958 in this hospital approximately $20,000.00 was spent on antibiotic tests. So there are, therefore, good reasons for a detailed examination of the test and an attempt to assess its value in practice.

Perrin H. Long in 1952 in an address to the New York Academy of Medicine made a statement to the effect that a single in vitro disc test for antibiotic sensitivity is no more reliable than an educated guess. Without pausing to question how reliable is an educated guess, I will quote the words of Maxwell Finland, the doyen of North American antibiotic medicine, in an Editorial in 1955: "Simple paper disc or tablet methods have proved entirely adequate for clinical use when the results are intelligently applied by clinicians . . . Experience has also indicated that, for many infections in which antimicrobial therapy has proved most successful, proper clinical diagnosis and bacteriologic identification of the infection are fully as satisfactory a guide to the choice of the proper therapeutic agent as are the most elaborate and detailed methods of testing sensitivity of bacterial cultures."

Despite this authoritarian statement, criticism of the value of disc tests has continued largely on the basis of their variability as compared with tube dilution methods—"Their reliability as an in vitro test to predict an in vivo effect is doubtful when the results vary so significantly with variations in the method of study" (Hoffman, Jackson and Turner, 1958). Even among those using disc methods there is no general agreement on technical details —a comparison by Power (1955) shows that there is marked variation (up to twenty-fold) in antibiotic content of discs used in different places. Different workers use different sized zones of inhibition to distinguish sensitive from resistant organisms into classifications of "moderately" and "slightly" sensitive. Some workers use one disc, some use two and some use three. It is difficult to find published accounts of disc sensitivity testing by different authors which do not differ in some respect or other.

On top of the apparently anarchical situation we have described, Greenberg, Fitzpatrick and Branch (1957) found that antibiotic discs, produced commercially, contained anywhere from 2% to 300% of the labelled content. This was discovered following complaints that discs with a high labelled content showed less activity than those with a lower labelled content. Despite these considerable variations the authors state that most laboratories continued to use such discs and said ". . . they may still give useful results. . . the majority of the discs assayed would probably yield satisfactory tests in spite of their off potencies." Also, to quote Branch, Starkey and Power (1959): ". . . the concentration in a disc may vary greatly and still satisfactorily outline categories of sensitivity." (Nowadays all antibiotic discs sold in Canada are controlled by the Department of Health and Welfare and must contain within 40% of the labelled potency—obviously not a stringent requirement).

These findings and statements leave one with the general impression that antibiotic disc tests are not particularly accurate or reliable. However, Taylor, Heimer and Spicer (1958), in a detailed and careful analysis of the method, while describing it as "highly accurate and reproducible," show that on the average organisms must show a five-fold difference in relative sensitivity to an antibiotic before one can be sure of detecting the difference by the disc test.

The Problems

The conflicting views and conclusions we have outlined above, and the fact that the tests are costly and time-consuming, make us ask the following questions: firstly, is the test reliable or not, and secondly, if it is reliable, what does it tell us, and thirdly, what means do we have, or should we have, of controlling the test?

Reliability

Our first problem is to decide whether antibiotic disc tests are "reliable." Some experimental work (Taylor et al 1958; Ericson and Svartz-Malmberg, 1959) may clarify this point: discs have been placed on agar plates inoculated with a thin film of organisms. The plates have been incubated and the width of the circular zones of inhibition of bacterial growth have been measured. Even with a single strain of organism and discs containing the

same amount of a single antibiotic there will be some variation if the individual zones are considered separately. If the average zone size is calculated from a number of observations and compared with the averages of other groups of observations, it becomes obvious that a reproducible value is being approached. One of the original methods of assaying penicillin was based on this principle, and could be made as accurate as required simply by increasing the number of measurements. The individual measurements, however, varied appreciably. In the disc test we rely on a single observation which is subject to variation (the amount of variation is different for different antibiotics), but we can say that on the average, but not invariably, the test will give the same results under the same conditions. In short we cannot regard the disc test as "reliable" as a chemical test such as the measurement of blood sugar where variation is negligible, but much more often than not it will be close to the right answer.

We mentioned above that, despite gross discrepancies in the antibiotic content of discs, satisfactory tests could be obtained. Even now in Canada the antibiotic content of discs need only be within 40% of that stated on the package. We might interpret this as indicating that the tests were so unreliable anyway that it does not matter how much antibiotic they contain. This is not true, but it stems from the fact that it requires a large change in antibiotic content of a disc to produce a small change in the average size of zones of inhibition of an organism. The test is, therefore, relatively insensitive to changes of antibiotic content of discs, and variability in zone size from this cause is overshadowed by variability from other causes. This is the reason why tests were satisfactory when it was found that the antibiotic content of discs differed from their labelled content.

To summarize then, the test is reliable if we do not ask too much of it. The results of the test are not markedly affected by moderate changes in antibiotic content of the discs and on the average the tests give reproducible results under the same circumstances but we must learn to expect the occasional discrepant result.

The Information Supplied by the Test

It would be intellectually satisfying to be able to explain the antibiotic disc test in terms of the same mechanisms which occur in vivo. However, we do not know the mechanisms by which antibiotics act in vivo (we are not even sure that the antibiotics that are bactericidal in vitro are also bactericidal in vivo). Some believe that if the serum concentration obtained with therapeutic doses of an antibiotic exceeds the minimal inhibitory concentration for a particular organism, the antibiotic will on the average be effective against infections with that organism. Using this hypothesis we could say that the concentration of antibiotic in our disc should be of the same order as that obtained in serum with therapeutic doses of that antibiotic. Unfortunately, when we place our antibiotic discs on an agar culture plate a series of physico-chemical or physical influences are at work governing the rate of diffusion in the material forming our disc, the diffusion from disc to agar and also within the agar (Ericson and Svartz-Malmberg, 1959). It has been found for instance that antibiotic discs containing 50 micrograms of streptomycin may soon after their application to agar, provide a concentration of the antibiotic of 500 micrograms per millitre in the agar immediately adjacent to the disc. We do not ordinarily conceive of this sort of thing happening in the body. Also during the process of diffusion the organism being tested is growing under conditions very different from in the body. We cannot tell whether these conditions are such that they will increase or decrease the sensitivity of the organism to the antibiotic as compared with its sensitivity in the body. Such arguments do not only apply to the disc test, but to any test of antibiotic sensitivity. We should perhaps consider ourselves fortunate that in vitro tests do apparently assist in treatment, for it does not necessarily follow that substances active in vivo are also active in vitro.

Since there is obviously no simple theoretical basis for antibiotic disc testing of micro-organisms, our method of determining the value of the test lies in the correlation between laboratory results and those obtained from treating patients. Even if there were a simple theoretical basis for the disc tests a correlation between laboratory and clinical results would be essential and, once established, would override any other method, however well based in theory.

It is claimed that good correlation may be obtained between disc tests and clinical findings, but there have been few attempts to show this under planned and controlled conditions. A notable exception is the work of Canadian investigators (Rodger et al., 1956). A critical examination of this work and more recent investigations of the same group (Branch, Starkey and Power, 1959) together with other papers dealing with correlations between laboratory and clinical findings, show one thing quite clearly: organisms classified as "sensitive" to a particular antibiotic are obtained from groups of patients in whom treatment with the antibiotic was successful in at least 80% of the patients. This agrees with what we think is the situation in this hospital, that is to say that in at least four out of five instances the antibiotic indicated by sensitivity tests is successful in treatment. This may sound a poor average but we can find no evidence that it is exceeded by any other type of test however accurate or elaborate. It may be, as some claim, that tube dilution tests are less variable than disc tests. There is, however, no evidence that they give a better indication of the appropriate antibiotics. In addition disc tests have the most cogent

advantage of speed. In most cases, to delay treatment for the results of a dilution test would be unwarrantable. (The tube dilution test is a most valuable adjunct to the disc test in difficult cases).

Although a correlation of results obtained in patients from whom organisms described as "sensitive" are concerned—the evidence for a correlation between the results of treatment and organisms described as "moderately sensitive" or "moderately resistant" are not at all clear cut. The chances of successful treatment with a particular antibiotic among groups with "moderately sensitive" organisms seems to be about equal to the probability of an unsuccessful outcome in one investigation (Rodger et al. 1956). When almost invariably an organism is sensitive to one or more of the many available antibiotics the information that it is "moderately sensitive" to another is seldom helpful. Many workers do not include a classification of "moderately sensitive" in reporting the results of their tests. The organisms falling under this heading are included among the "resistant" organisms. The term "resistant" is again not absolute but is the reverse of our "sensitive." It means that, on the average, infections with organisms classed as "resistant" to a particular antibiotic will not respond to that particular antibiotic. But we are not surprised if an occasional "resistant" organism responds to antibiotic treatment.

We are now brought to the point where one should consider whether one disc is sufficient for each antibiotic in the test or whether two or three with different amounts of the same antibiotic should be used. The main purpose of using more than one disc for each antibiotic is to separate organisms of an intermediate sensitivity into a group. If one does not wish to do this, then there is little point in using more than one disc. If one is testing large numbers of organisms against from eight to sixteen antibiotics, there should be a compelling reason to multiply the work two-fold. No such reason has been put forward and it is interesting to note that one author (Haberman 1958) uses discs with three different quantities of antibiotics and uses them only to classify the organisms under test into "sensitive" and "resistant." There is nothing in his paper to destroy the impression that a single disc for each antibiotic would have provided identical results.

In this hospital we use a single disc for our test. If a zone of inhibition of any size is present the organism is described as "sensitive," if there is no zone, it is described as "resistant." Some people use a different criterion stipulating a zone of a particular size to distinguish between sensitive and resistant organisms. For example, they may require a zone of inhibition of 10 or more millimeters to indicate sensitive organisms and less than 10 millimeters to indicate resistant ones. Whichever criterion is chosen is of little importance, provided that the antibiotic content of the disc is so adjusted that the designations "sensitive" and "resistant" divide organisms into two groups. The "sensitive" group of organisms should be from infections the majority of which respond to treatment with the corresponding antibiotics. Likewise the "resistant" group should be from infections most of which do not respond to the tested antibiotic.

We know of no investigation attempting to discover an optimum (if there is one) size of zone for distinguishing between sensitive and resistant organisms. However, there is some evidence that there may be considerable variation in zone size as recorded by different observers, more so with some antibiotics than others (Taylor et al 1958). Probably it is easier and certainly it is less time-consuming to decide whether a zone is present or not, and therefore, we use this method.

From the foregoing it seems that the disc test is of value if it is agreed that antibiotics should be used in most infections. It is often stated that "most infections will get better by themselves anyway" — the inference being that antibiotics are used far too much. While antibiotics may be misused, the above statement should be recognized for the semantic trap that it is. The statement suggests that there are only two outcomes of an infection — either it gets better or it does not. We do not have to think very long for an illustration which exposes the fallacious argument, for example most patients with pneumococcal pneumonia will get better by themselves, but the exhibition of antibiotics shortens the course of the disease and diminishes the incidence of complications.

The Control of the Antibiotic Disc Test

Ideally we require two types of control for the antibiotic disc test; firstly, a technical control and secondly, a control over whether the test is providing assistance to clinicians in treating their patients. These controls should supply a more or less continuous check on the efficacy of the test. The technical control is relatively simple; while testing large numbers of organisms one knows that for instance all the pneumococci isolated in these laboratories are sensitive to all the commonly used antibiotics except streptomycin. If we find that this organism is resistant to one or other of the antibiotics, then this leads us to suspect that there is a gross deficiency of antibiotic content in at least some of the discs of the current batch. Similar observations are made on other organisms that are resistant or of which a certain known proportion are resistant to the antibiotic under study. If both the different strains of organisms and the different antibiotics conform to the usual pattern, we have reasonable assurance that our discs and our media are behaving satisfactorily. It is to be noted that we do not test each single disc directly but we do it indirectly by making a test of a batch of discs. It is possible to test each disc but only at the cost of a tremendous increase in the expenditure of time and materials.

At present what control do we have over whether the test is providing adequate assistance to clinicians in treating their patients? Are the majority of patients being benefited by the administration of the antibiotic indicated by our tests? The answer to this question is that we do not know for certain —we have a rough and ready measure in that, in the absence of complaints, we assume that the tests are doing their job. The obvious way of controlling the tests would be by well-planned clinical trials. However, anyone familiar with the difficulties of instituting these will know that the suggestion is impractical. Another method which may be worth trying would be to select charts of patients with certain types of infection and by using well-defined criteria measure the clinical effect that a certain antibiotic has and correlate it with the results of disc tests. Although such a method of control would not be wholly satisfactory, it would at least be an improvement on the present situation.

In summary then, we feel that the simplest type of antibiotic disc test is of value in clinical practice provided that its interpretation is clearly understood. The test should, however, be subjected to a more or less continuous clinical control of some kind.

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Psittacosis

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The etiologic agents of virus pneumonitis are listed in Table 1. Some of these viruses commonly produce respiratory disease in Manitoba, others do so rarely. This paper deals with the diagnosis of a case of Psittacosis in a patient residing in Manitoba; as such it represents an uncommon cause of viral pneumonitis in this province.

Table 1

Virus:		Date of Isolation
Psittacosis		1930
Influenza "A"		1933
Influenza "B"		1940
Influenza "C"		1950
Influenza "D" (Sendai virus)		1955
Adenovirus group		1953
Virus J. H. (Johns Hopkins)	Antigenically related, but sufficiently different to be separate types	1954
Virus DP471		
Virus 2060		
Reovirus group (previously designated as Echovirus type 10)		1959
Echoviruses, types 8 & 20 (Enteric cytopathogenic human orphans)		1958
Virus "U" Antigenically related to Echovirus group		1959
C.A. (Group Associated) virus		1958
Coe virus		1958
Hemadsorption viruses, types 1 and 2		1958

It should be noted that the virus of primary atypical pneumonia has not been included in the table, as there is some doubt as to whether it is a distinct entity. Respiratory infections similar to primary atypical pneumonia and demonstrating a rise in cold agglutinins have been shown to be due to the "Eaton virus." Members of the Coxsackie "B" group of viruses responsible for pleurodynia in humans have not been included as they do not affect the lung parenchyma proper, but only associated serous membranes, i.e., pleura and pericardium.

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Case Report

Mr. G. C., a sixty-seven year old male laborer from Beausejour, Manitoba, was first seen because of generalized weakness and cough which had been present for three weeks. Examination showed his temperature to be 104° F., pulse 110 per minute, respirations 30 per minute. He appeared to be very toxic and listless and had a dry non-productive cough. Diffuse, moist crepitations were audible in both lung fields on auscultation. The tentative diagnosis was bronchopneumonia; he was admitted to the Beausejour Hospital. Following admission to hospital a chest x-ray revealed consolidation of the left apical linula, and dorsal segments of the left lower lobe. There was also a consolidation of the right midzone and base. The appearance and distribution of this consolidation was suggestive of an atypical pneumonia.

Laboratory investigation revealed a hemoglobin of 74%; white blood count of 10,450/cu. mm with a differential count showing 62% lymphocytes and 32% neutrophils. Erythrocyte sedimentation rate was 59 mm. per hour. A tuberculin patch test was negative. Three successive sputum specimens were reported negative for Mycobacterium tuberculosis. The x-ray report together with the knowledge of close contact with parakeets and canaries which were kept in the home, led to a tentative diagnosis of psittacosis. Three separate bloods were sent to

the Manitoba Virus Laboratory and this diagnosis was substantiated. The first and second bloods taken on consecutive days showed a titre of 1:128 (plus) to the psittacosis antigen. A third blood taken five days later showed a titre of 1:6000.

The patient was given achromycin 250 mgm. four times a day; on the fourth day of this treatment his temperature was normal, and he was generally improved. The following day an x-ray of the chest showed considerable clearing of the areas of consolidation. Seventeen days after admission the patient was discharged feeling quite well. His progress immediately following discharge from the hospital was not known, as he, unfortunately, failed to return for follow up.

Discussion

Psittacosis was first recognized in the latter part of the 19th century as a disease of parrots transmissible to man[1]. About 1930 a number of human cases of psittacosis were reported from many parts of the world including Great Britain, U.S.A. and Germany[2]. These cases were all traced to a common source of psittacine birds being exported from South America. The outbreaks initiated investigations that led to the isolation and identification of the virus. Sporadic cases continued to occur throughout the years in various parts of the world; it was appreciated that the reservoir of infection in some of these cases was not psittacine birds, but often domestic fowl[3, 4]. Table 2 lists the known reservoirs of the virus in birds, mammals and humans. Turkeys are known to be a common source of virus on this continent; a more recently recognized reservoir is pigeons.

Table 2

Psittacosis-Lymphogranuloma Venereum Group of Viruses

Avian Viruses:	Mammalian Viruses:
Psittacosis virus	Meningo pneumonitis virus
Pigeon and Dove virus	Mouse pneumonitis virus
Chicken virus	Australian mouse pneumonitis
Duck virus	Hamster virus
Willet virus	Feline pneumonitis virus
Turkey virus	Opossum viruses A & B
Egret virus	Pneumonitis of sheep
Mutton Bird virus	Pneumonitis of goats
Pheasant virus	Bovine pneumonia virus

Human Pneumonitis Virus:
San Francisco virus
Louisiana virus
Pneumonitis virus

The virus is spread from birds to man by aerosols of dust; transmission from man to man has been reported, but is unusual[3]. Human susceptibility varies greatly and is not entirely related to previous experience and circulating antibodies; children are rarely affected[5]. In man the disease is manifested clinically as a respiratory infection resembling influenza; radiological changes resemble atypical pneumonia. The disease is often considered to be severe, occasionally resulting in death. The high incidence of antibodies in Eskimos, however, suggests that mild and even subclinical forms of the disease are common. In birds and animals a variety of diseases can be seen (Table 3). This is one of the few virus diseases that responds to antibiotic therapy, particularly to chlorotetracycline and oxytetracycline.

Table 3

Psittacosis Lymphogranuloma Venereum Group Type of Disease

1. Pneumonitis	5. Trachoma
2. Enteritis	6. Inclusion conjunctivitis
3. Encephalomyelitis	7. Lymphogranuloma venereum
4. Enzootic Abortion	8. Cat Scratch fever

Psittacosis occurs sporadically in all countries of the world, but the incidence varies greatly. In England approximately 50 human cases are diagnosed each year by the Public Health authorities[1]; fewer cases are reported in Canada. Another indication of the incidence of the disease can be based on antibody studies. Out of 1792 sera collected within this province, 19 showed antibodies to psittacosis virus (approximately 1%). In contrast, antibody surveys on Eskimos in the Arctic show that the incidence varies from 15% to 80%[6]; this high incidence in Eskimos is probably related to their different way of life.

Laboratory Diagnosis

Patients with viral pneumonitis should be questioned for a history of avian contact; such contact particularly with sick birds indicates desirability of carrying out virological tests. The best laboratory support for the diagnosis is the demonstration of an increase in circulating antibodies in the serum during the course of the disease; for this purpose two sera are required, one when the patient is first seen (acute) and the second serum sample 12-14 days later (convalescent). Sputum may also be submitted for isolation of virus in embryonated eggs.

Conclusions

1. A case of human psittacosis occurring in Manitoba has been presented, the probable source of infection being psittacine birds.

2. Psittacosis may not represent a common cause of pneumonitis in Manitoba, but is probably an important etiologic factor in a few cases. Where a history of contact with birds is elicited specimens should be submitted for virological examination.

Addendum

Since the diagnosis was established on this patient, a second case of psittacosis has been identified. This occurred in the Winkler district, the reservoir of infection was probably chickens. The first serum had antibodies at a dilution of 1:2, the second serum at 1:256.

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Psychiatry

The Therapeutic Community and The Mental Hospital

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The term "Therapeutic Community" is becoming popular in psychiatric circles and, with increasing popularity, the meaning of the term is becoming less well-defined, vague and sometimes misleading. It is being applied to many diverse therapies and hospital populations which do not have any strict basis for comparison. Wilmer[1] has pointed out that in comparing different therapeutic communities with each other, the psychiatrist must accurately identify the type to which he is referring in each case. He proposes classifying these communities under six headings: Hospital Facilities, Patient Sample, Staff, Therapy, Research and Evaluation, and Legal Status of Patients. In all, he proposes 32 points of identification under these headings. The present paper is concerned only with therapeutic communities in mental hospitals with unselected groups of mainly psychotic patients.

The concept of the therapeutic community as applied to a mental hospital is not new. The colony at Gheel in Belgium has operated a programme of community care for 700 years. However, we must make some distinction between community care and the therapeutic community in which patient interaction and patient-staff interaction under psychiatric guidance are the therapeutic forces. The beginnings of therapeutic community experiences in recent times date back to the Northfield Experiment[2, 3, 4, 5], in which a large group of soldiers with combat neuroses were treated by group therapy based on therapeutic community principles. From this proceeded the work of Maxwell Jones at the Social Rehabilitation Unit, Belmont Hospital in England[6]. This most important project has undertaken the psychiatric treatment and social rehabilitation of groups of up to one hundred patients suffering from severe character disorders with weak egos and poor anxiety tolerance.

The application of similar principles to mental hospitals with predominantly psychotic populations has been undertaken on this continent by Wilmer[7, 8, 9, 10, 11], Mathews[12] and by MacDonald and Daniels[13]. Wilmer, in a naval psychiatric hospital in Oakland, California, ran a therapeutic community on a locked ward of 34 beds over a period of 10 months. During this time 939 patients passed through this receiving ward. About 45% of these patients were psychotic, and many of them had arrived at Oakland in restraint and with the reputation of violent behaviour. As a result of the community efforts, restraint, seclusion and the use of barbiturate sedatives were eliminated, and disturbed, psychotic patients began to exhibit considerable control over their behaviour. Mathews[12] has described an attempt to establish therapeutic communities in the State Hospitals in Louisiana and MacDonald and Daniels[13] in Denver established such a community in a 75 bed, four ward psychopathic hospital.

As stated previously, it is difficult to compare these efforts due to the differing circumstances under which they were established. However, there exists in all these studies an underlying theme of increased patient participation in treatment, of increased staff-patient interaction and increased understanding of the patient world as a social group with needs for adequate channels of communication with the staff. "Therapeutic Community" implies that the responsibility for treatment is not confined to the medical staff but is a concern also of the other members of the community, i.e. the patients. This involves a drastic revision of traditional staff and patient roles in a mental hospital. Free communication between doctors, nursing staff and patients must be established as far as possible and this involves increased time being spent in groups, community meetings and staff meetings which must be utilized to deal with staff interpersonal tensions as well as to discuss patient problems and group relationships.

As Wilmer[7] says: "The basic departure of the therapeutic community from traditional plans of mental hospital management stems from its different view of staff-patient roles and relationships. On the traditionally managed ward, the role of the patient is to be sick. Staff attitudes are consequently based on the expectation of sick behaviour. It is even possible that certain clinical syndromes or characteristic ways of behaving in a hospital environment are actually a response to this expectation. In the therapeutic community, in contrast, the role assigned to the patient is that of a responsible member of a social group, and the expectation is that his behaviour will conform as nearly as possible to the norms of society." Thus in the therapeutic community the emphasis is placed on socio-environmental factors in the patient's hospital experience. The constant expectation of self-control and the firm expectation of socially acceptable behaviour in the community leads to patient management based on social demands within a real setting and provides the individual with a capacity and technique for stable life in the real world. The operations of the community are designed to create a social environment which gives the patients and staff a sense of membership in the community. "The community is neither authori-

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tarian nor democratic nor permissive. Its efforts are not dictated by humanitarian purposes but by therapeutic purposes which are humane."[1]. There seems to be no doubt that under most circumstances these principles lead to improved "management" of patients' behaviour. Whether these communities are also "therapeutic" in the sense that they enable patients to change their psychotic thinking is less evident.

The Therapeutic Communities in Selkirk Hospital

Two therapeutic communities have been established in this hospital. The first has been in action for about 11 months and consists of the patients and staff of the Male Admission Ward (15-20 patients) and of a "lower" Ward in the same building to which patients are usually transferred after physical treatment (40 patients). The total community population is therefore about 60 persons, including doctors, attendants, occupational therapy workers, and patients. Five or six times a week a community meeting is held, usually in the late afternoon. This community meeting forms the basis for community development. In it the emphasis is on free discussion with minimal direction from the group leader and limited interpretation confined to occasional exposure of underlying feelings in verbalizations by group members. As far as possible, discussion of individual personal problems and minor administrative problems is diverted by suggesting that the patient see the doctor after the meeting or by declining to answer the question as an indication that it is not of general interest to the group. The leader is generally a passive "participant observer" of the group scene. At the end of the group meeting which lasts 45 minutes, a summary is made of the discussion and the group theme is pointed out if possible. After the group meeting a staff meeting is held in the same room for 30-45 minutes. At this meeting the various themes, verbalizations, movements and actions of the group members are analyzed and discussed in terms of their meaning to the individual and to the group or part of the group. At this time also, the staff members are free to discuss their anxieties as they relate to the community and to the hospital as a whole. It is felt that the spirit of the community meeting may be carried throughout the day until the next meeting and also that the attitudes of the staff will be changed over the whole 24 hours, if they are able to verbalize their anxieties in the post group meeting. Thus one of the primary aims of the community is to "treat" the staff.

The second group in this hospital was established on the female "refractory" ward about six months ago. About half of the 110 patients on the ward attend the community meetings, although all are free to do so. Meetings are held twice weekly and are conducted in much the same way as for the first group. It is doubtful whether there is any strict basis for comparison of these two communities due to the differing patient population.

Observations made in the communities

Perhaps the most difficult problem in the communities has been to stimulate participation by the staff. At the beginning of the project, staff members would sit in small groups of their own or would sometimes sit outside the main group or would sit in the doorway or stand with arms folded in the doorway. The ward supervisor took up a position at the right hand of the leader and chided those patients who showed any verbal hostility and "encouraged" the withdrawn patient to "say something to the doctor." Verbal participation by the staff was and still is minimal and the "feeding back" of information about patient or group behaviour into the community meeting is still almost non-existent. It is obvious that it is tremendously difficult for the staff to feel part of the community, and, although interpretation in the post group meetings has reduced the defensive clustering of staff, it has not yet relieved the anxieties generated by their being asked to identify themselves with a partly psychotic community.

At one point staff anxiety rose to a high point and rumours of impending resignations by staff physicians were being spread throughout the hospital, and there were strong feelings about the "permissiveness" of the community. Aggressive behaviour by patients on the ward rose markedly. The staff feelings were discussed openly in a staff meeting and the anxiety and the patient aggression subsided shortly afterwards. Some of the comments in the meeting expressed the anxiety felt over the change in the role of the staff in the community, e.g.: "We used to know how to deal with a disturbed patient, but now we don't know what to do." They expressed anxiety over the fact that seclusion of disturbed patients was being strongly discouraged and about their feelings that talking to disturbed patients was no substitute for action.

Another example of staff anxiety being reflected in a patient's behaviour was seen in the case of a 23-year-old schizophrenic patient on his second admission to this hospital. This patient complained of being weak and tremulous, and had frequent "fainting spells." He spent much of his time in bed and refused to come to the community meetings because they made him more anxious. His behaviour was discussed at a staff meeting and it was discovered that the whole staff including the physicians were concealing some doubts about this patient having thyrotoxicosis, a fear that had been engendered by his slight exophthalmos. Under open discussion, it became obvious that this patient was actually in good physical health and the nursing staff were reassured about this problem. The next day, without any conscious effort on the part of the staff, this man lost his anxiety and began to behave normally, joined the community meetings and took an active part in them. In a short time he was able to go home on pass and is now discharged from the hospital.

Problems in the group meetings can be discussed as follows:

Domination of the group

Hypomaniac patients and grandiose paranoid patients often attempt to dominate the meetings and sometimes succeed in doing this for some days. The group as a whole usually tolerates this monopolization for some time, but eventually attempts to deal with it in a forthright, realistic manner. Sometimes it has been necessary for the leader to make interpretations to the group concerning the need for monopolization or concerning the underlying affect in order to reduce the monopolization by one patient.

Tolerance of Delusions

Delusional verbalizations are tolerated in the group, as long as it is felt that the patient is making an attempt to grope towards a solution of his problems. Fixed, dogmatic delusional thinking is largely ignored or dealt with by direct denial, usually by other patients. It is surprising how one delusional patient may be able to test reality for another patient. On one occasion a patient with very fixed systematized delusions relating to religion and philosophy dominated the group for some weeks. Finally, after attempts by other patients to shift his delusional thinking, the group showed considerable irritation, and he excluded himself from the meetings, despite efforts on the part of the staff to persuade him to come back. During his stay in the group it was evident that from time to time he was putting forth considerable effort to control the verbalization of his delusions and, thus, gain the approval of the community.

Acting Out and Bizarre Behaviour

Aggressive acting out during the community meetings has not occurred at any time. Bizarre behaviour is also uncommon during the meetings and is poorly tolerated by other patients who show considerable embarrassment and irritation when it occurs. Verbal aggression is, of course, common and usually directed towards the hospital and the staff. Acceptance of patients' psychotic behaviour by the staff, outside the community meetings, is quite common, and it is obvious that some patients have been seen in a psychotic role for so long that any attempt to change this role produces considerable staff anxiety. On one occasion a chronic schizophrenic patient who was delusional, hallucinated and manneristic was placed on an ataraxic drug to reduce some of these manifestations. In a very few days there was a vigorous protest from the staff that "Harry was a changed man" and "would we please discontinue his medication." It seemed to the physician that Harry was less psychotic, but his role on the ward had been defined in a particular way, and any change was threatening to the staff.

Character Disorders and Psychopaths

Psychopathic personalities and other character disorders are generally no problem in the group meetings, and, in fact, are usually able to stimulate group discussion without necessarily monopolizing the meeting. Many of them are able to make acute observations regarding the behaviour of other group members. On rare occasions two or more "psychopathic" patients have banded together to dominate the meeting with hostile remarks directed towards the staff. This usually does not persist as they are unable to continue their relationship in this way for more than one or two meetings. Staff anxiety rises on these occasions, however, and there are usually demands for separation and transfer to other wards of these patients. Criticism of the leader is poorly tolerated by the rest of the staff, and this is reflected in the staff meetings with comments such as "How can the patients come to respect us if you allow them to be so aggressive to you?"

Group Themes

Themes in the meetings commonly revolve around dependency, e.g.: food, being "looked after," being "taught" as in school. Other common themes are: insecurity regarding acceptance outside of hospital, the cause of mental illness, the fear of loss of control and so on. Reflection of ward problems and anxieties in these themes is, of course, common and provides valuable material for discussion in the post group meeting. Early attempts to allow the patients to take responsibility for their own welfare on the ward led to considerable indecision and marked anxiety on the part of both patients and staff due to the feeling of abdication of authority by the leader. It is felt that it will take a long period of time before the patients are able to accept responsibility and before the staff is able to relinquish authority without relinquishing their ultimate responsibility. In this regard, the formation of a patients' "Assembly" which is a form of total patient participation in hospital management which was created about one year ago may eventually play a part in encouraging acceptance of responsibility by patients and may also eventually be tied in with a therapeutic community involving the whole hospital.

The Second Community

The situation in the second community on the female "refractory" ward is obscure and confusing as yet. The group as a whole is much less verbal than the first group, there is a considerable amount of bizarre behaviour and very occasionally aggressive acting out. The themes developed by the more verbal members of the group commonly revolve around aggressive behaviour which has occurred on the ward. One particular case illustrates the impact which the community can have on a patient. The patient, a 22 year old, high grade mental defective girl, had been admitted two years previously due to her poorly controlled behaviour and impulsive outbursts of rage. Before the community began she was poorly controlled on the ward—

smashing windows, attacking other patients and more recently thrusting needles under her skin. Ataraxic drugs and barbiturates had no effect on this behaviour. In her first community meeting she was noisy, aggressive and threatening to other patients and sat in the centre of the group. There was, obviously, considerable disapproval of her behaviour by the group. In the second meeting she still sat in the centre of the group but was quieter and toward the end of the meeting appeared depressed and rested her head on her arm. During the third meeting she excluded herself from the group and hovered on the fringe of the meeting. Her behaviour on the ward improved. Shortly after this she again impulsively smashed windows on the ward in response to some minor frustration. In the next meeting she was elated, overactive, noisy and dominated the group. She walked around the centre of the group continuously and acted out a courtroom scene, calling for witnesses and so on. When asked for what she was on trial, she announced "for murder." Attempts by the leader and other group members to break through to the underlying guilty and depressed feelings were unsuccessful at the meeting but during the staff meeting the patient came in and sat down with the nurses. She obviously wished to tell us something and after being urged to tell us what she felt badly about by a nurse, she broke down and cried and expressed considerable guilt over the window smashing incident. From that time on this patient improved rapidly, began working, was transferred to an Open Ward and within three months was "probated" from the hospital. This case illustrates the dramatic effect that the disapproval of the community can have upon aggressive anti-social behaviour in this type of patient.

Theoretical Considerations

It would seem from Wilmer's study and it is also our general impression that a therapeutic community as described here is a potent force in altering social behaviour in psychotic patients. This type of community therapy increases staff-patient interaction both in the group meetings and because of the increased interest aroused in individual patients and their reactions, during the rest of the day also. The community demands behaviour which at least approaches "normal" behaviour. It is tolerant of delusional thinking providing it is not fixed, repetitive and without any striving towards reality. It is intolerant of bizarre behaviour and aggressive acting out. Thus the community fosters repression and suppression especially of bizarre and aggressive behaviour. On the other hand this is not repressive therapy in the authoritarian sense. It is fostering of self control rather than the use of imposed control. Disregarding for the moment the aetiological factors in the Schizophrenic process, we can consider the specific behavioural disorders seen in hospital. Some of these patterns are continuations of patterns clearly established outside of hospital and some are new patterns established after admission and variously attributed to the ongoing schizophrenic process or to the reaction to hospitalization. It is possible that many of the patterns of behaviour seen outside of hospital are partly due to fostering of this behaviour by significant people surrounding the patient. For example, paranoid delusions, sexual acting out and aggressive acting out in Schizophrenics can often be traced to specific fostering of these patterns by the family. On the other hand increasing dependency and compliancy and increasing social withdrawal are often the result of hospitalization. Loss of self-identity and dehumanization are common accompaniments of prolonged hospital care.

All these patterns of behaviour are at least partly the result of social processes rather than the direct result of some primary biological or psychological defect. It would seem sensible, therefore, to attempt to reverse these patterns by social means rather than chemical means. Of course, mental hospitals have always attempted to do this—especially with regard to aggressive behaviour. Unfortunately, authoritarian repressive therapy tends to produce compliant, dependent patients with increased difficulty in social relationships. Perhaps the therapeutic community represents a way of utilizing all that is best in mental hospitals without increasing the social isolation of the schizophrenic patient. The problems of relinquishing authority which is superego based in favor of ego-based authority without any sense of loss of ultimate responsibility are immense in large mental hospitals and it is perhaps this problem more than any other which makes the establishment and development of therapeutic communities such a prolonged and difficult task.

Discussing the effects of hospitalization on schizophrenic patients from the purely theoretical point of view, one can make use of the work of Johnson & Giffen[14, 15] and others who have emphasized the importance of exogenous trauma in the production of specific delusions or specific behavioural patterns in schizophrenics. They feel that the psychotic process is an adaptive technique developed in an effort to refute the experiences of parental assaultive behaviour of an overwhelming destructive nature. The main defensive process used is introjection of the hostile aggressor with repression and denial. Repetition of the original traumata by the parents eventually leads to breakdown of repression and projection of the experience to other objects. Even after the patient has left the domination of his parents, hostile actions of other persons towards him, similar to his parents' behaviour, may increase the rage until repression cannot be maintained. Giffen[15] maintains that the types of assault fall into two main groups.

1. Persistent obstruction to ego differentiation.
2. Discrete physical or psychological assaults.

(a) Murderous, castrative or incestuous assaults.

(b) Destructive fantasies projected to the patient.

(c) Threats that insanity may develop.

Mental hospitals may perpetuate the assaults to the patient's ego in a similar manner.

1. By obstructing ego differentiation, e.g.:

(a) by isolation

(b) by fostering dependency

(c) by encouraging loss of self-identity.

The threat to hospital staff at evidence of ego expansion on the part of patients is often seen in the therapeutic community when attempts are made to throw responsibility on the patients. Isolation and loss of self-identity are the result of the attempted mass treatment of mental disorder. One might speculate that the staff behave in the same ways as the parents because of their own need to deny, repress and later project on to patients their own dependency problems in addition to the introjection of hostility and its later projection on to the patients.

An example of the projection of hostility on to the patients was seen recently on one of the "chronic" wards. Considerable effort had been exerted by the ward physician to resocialize the patients on this ward. One of the problems was to persuade patients to use the sitting room and not to sit along the walls of the rather dismal corridor as they had done for many years. After some limited success in this direction the physician visited the ward one day to find every patient lined up against the walls again. Having expressed a considerable amount of irritation, he finally ordered the ward supervisor to "get the patients off the walls." Two hours later, on an unexpected visit to the ward, he was surprised to find each patient placed neatly in a chair in the middle of the corridor, all facing in the same direction, one behind the other.

2. Specific assaultive behaviour.

(a) Reinforcement of aggressive behaviour by patients by expectation of this type of behaviour and by actual assaultive behaviour or threats.

This involves again introjection of hostile aggression by the staff with subsequent projection on to patients and is seen in the remark of a staff member that if the patients were allowed more freedom they would break out in an aggressive way.

(b) Fostering of paranoid attitudes.

As might be expected, paranoia is rife in institutions. The Patients' Assembly mentioned previously was believed by some to be an organization for spying on the staff. This was communicated to the patients. Here one sees the fear of an internalized hostile aggressor projected into the community. Patients who have been brought up with paranoid parents simply have their paranoid attitude fostered in a community of this nature.

It would appear that in a rigid, authoritarian community with marked vertical stratification, the main staff defenses are introjection of hostile aggressors or in another sense introjection of the guilt of their superiors and projection of this on to the next lower level. It is doubtful whether this can be dealt with by individual therapy for the patient because he has to exist in the hospital community outside of therapy. Similarly in small group therapy the staff is not treated. In a therapeutic community one of the aims is to treat the staff so that they

(a) do not have to introject hostility

(b) do not have to project on to the patients.

Obviously, this would involve not only "treatment" of the staff as a whole but also reduction in vertical stratification in the hospital with more freedom to express hostility from one level to the next higher level. One can see from this that the establishment of a therapeutic community is a very long term project in a large mental hospital but it is possible that the only way in which any really basic change could take place in the schizophrenic process under mental hospital treatment would be by the development of this type of approach.

Summary

A brief review of the literature on Therapeutic Communities and their application to Mental Hospitals is given.

The development of two therapeutic communities in Selkirk Hospital for Mental Diseases is described.

The theoretical basis of the therapeutic community principle is discussed, and the effects of long term hospitalization on schizophrenic patients is considered from the point of view of staff-patient interaction.

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Radiotherapy

The Radiotherapy of Carcinoma of the Bronchus

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There is good evidence to show that a bronchial carcinoma can be completely destroyed by means of external radiation. Bromley and Szur (1956) described the pathological appearances in a series of 62 patients who were submitted to deep x-ray therapy prior to pneumonectomy. Careful examination of the surgical specimens failed to reveal any evidence of tumor in 29(47%) and in a further 14 (22%) tumor cells were present but degenerate. Tumor cells considered viable were found in the remaining 19 (31%). As similar effects can be expected to occur in those mediastinal nodes which may be invaded by tumor and are beyond the reach of surgery but which can be irradiated along with the primary tumor, there is surely a case for considering radiotherapy as an alternative to surgery as the treatment of choice even of the early case of carcinoma of the bronchus. Some support for this has been provided by Smart and Hilton (1956) who reported the radical x-ray treatment of 33 patients with carcinoma of the bronchus who were selected as if for curative surgery. The results were, if anything, slightly better than those of comparable surgical series but the number of patients so treated was small and only twelve had been followed for more than five years prior to publication of the report.

In recent years high energy beams such as that produced by a Cobalt unit have become available. The greater penetration, skin sparing effect, diminished systemic reaction and the homogenous irradiation thus obtained can be expected to produce better results than those reported by Bromley and Szur and also by Smart and Hilton where deep x-rays in the 200 - 250 Kilovolt range were employed. However, there is as yet no report on adequately large series of early cases treated by such apparatus.

At this time surgery is accepted as the treatment of choice for carcinoma of the bronchus, and so practically all the patients referred to a Radiotherapy Department have been found unsuitable for surgery, either because of too extensive disease or by reason of impaired respiratory function or poor general condition.

Many of these patients show at their first attendance distant metastases or such advanced local tumor that simple relief of symptoms in the shortest possible time must be the object of treatment, and little can be done to delay the final outcome of the disease. Of the thirty-seven patients with the diagnosis of carcinoma of the bronchus seen personally in the Radiotherapy Department at the Winnipeg General Hospital during one year ending February, 1958, sixteen must be included in this group. Of these, thirteen were given radiotherapy directed chiefly to the relief of cough, hemoptysis, superior vena caval obstruction and pain due to metastases in bone. No treatment was advised for three patients with generalised disease but without localized symptoms. All sixteen patients with advanced disease are now dead, but much relief of symptoms was attained. Seven of nine patients who received palliative treatment to the chest and about whom sufficient information is available, died of distant metastases rather than of the primary tumor in the chest.

In seventeen of the thirty-seven patients, tumor appeared to be confined to lung and mediastinum, and it was decided in each case that a full course of radiotherapy to potentially curative dose levels should be given. It was realised that these were far from favorable cases for such an objective and that in most cases the very reasons which made them unsuitable for surgery also made them unsuitable for "curative" radiotherapy. However, it was hoped that treatment would result in relief of symptoms, prolongation of life and in an occasional case long term survival.

Two cases where tumor was confined to the chest were not treated, one because of intercurrent disease and the other because of death due to pulmonary embolus before treatment could be commenced. Two further patients received mediastinal irradiation following resection of the primary tumor.

The factors of importance in the selection of patients for a full course of treatment will be discussed below and illustration will be made by reference to the group of seventeen patients.

Spread of Tumor

In order to attempt complete destruction, a tumor dose in the range of 5000 to 6000 r. must be achieved throughout the treatment area over a period of four to five weeks. The limitations of local and general tolerance to radiation restrict the volume of tissue which can be so treated. Where disease is extensive only low doses aimed at palliation can be reached. Lymphatic spread beyond the mediastinum in most cases means that the area of disease is too large and the patient must be excluded from this group. It is, of course, of little benefit to the patient to be submitted to a prolonged course of radiotherapy in an attempt to irradiate tumor in the chest, no matter how successful the result, if he dies soon afterwards by reason of distant metastases.

Case I

A man, aged 77, was admitted to hospital complaining of pain in the chest, cough, sputum, loss of appetite and of weight. Chest x-rays showed a

large mass placed medially in the right upper lobe and aspiration biopsy showed squamous cell carcinoma. There was no clinical evidence for metastases and so he was given an intensive course of Cobalt therapy directed to the primary tumor and mediastinum. After three weeks there was considerable symptomatic relief and a chest x-ray showed marked regression of the mass. However, from then on his course was downhill and he died a week after treatment was concluded. At autopsy, his liver was found to be largely replaced by metastatic carcinoma. In the chest only a few degenerate tumor cells were to be found at the site of the primary lesion.

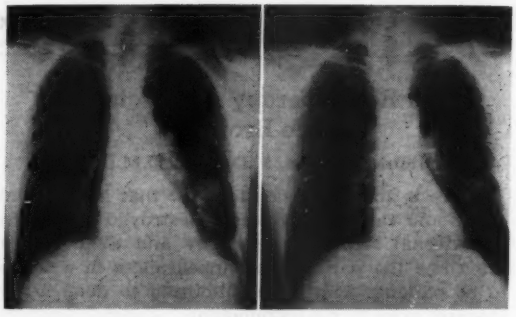
Type of Tumor

Undifferentiated and anaplastic tumors respond more rapidly and to lower doses of radiation than do well differentiated squamous and adeno-carcinomas. With an "oat" or "small cell" tumor where the histological report finds confirmation in clinical evidence of very rapid growth, a short course of radiotherapy which can be completed in ten to fourteen days is effective in the control of tumor within the chest during the short period which elapses before the inevitable appearance of distant metastases.

Unless a tumor very definitely fits into this special class, the full course of radiotherapy should be given, for, if we are concerned with more than a temporary effect, then the radiosensitivity of all cells within the tumor must be considered rather than the bulk of them. The histological report was based, in all these cases, on the examination of a small sample of the tumor, and this may not have been representative of the remainder. Also the appearance of several distinctly different histological types in one tumor is frequently described. We, therefore, gave a similar course of treatment to a patient showing a "well differentiated" tumor as to one where the pathology report was "relatively undifferentiated." Even with the very undifferentiated tumors a worthwhile period of useful life may be obtained before distant metastases cause death.

Case II

A man, aged 61, was admitted to hospital complaining of cough of three weeks duration, also blood stained sputum and pain in the left chest. Examination showed a small pleural effusion and x-rays revealed that there were also extensive infiltrations in the left lower lobe. Biopsy of tissue in the left lower lobe bronchus showed anaplastic carcinoma and aspirate of the pleural effusion was blood stained. There was also a left recurrent laryngeal palsy and he was therefore considered unsuitable for surgery. A course of Cobalt therapy resulted in marked relief of symptoms. Only slight cough and hoarseness of voice remained. He returned to work and remained well for four months. There was then evidence of bone and brain metastases from which he later succumbed.



Case II

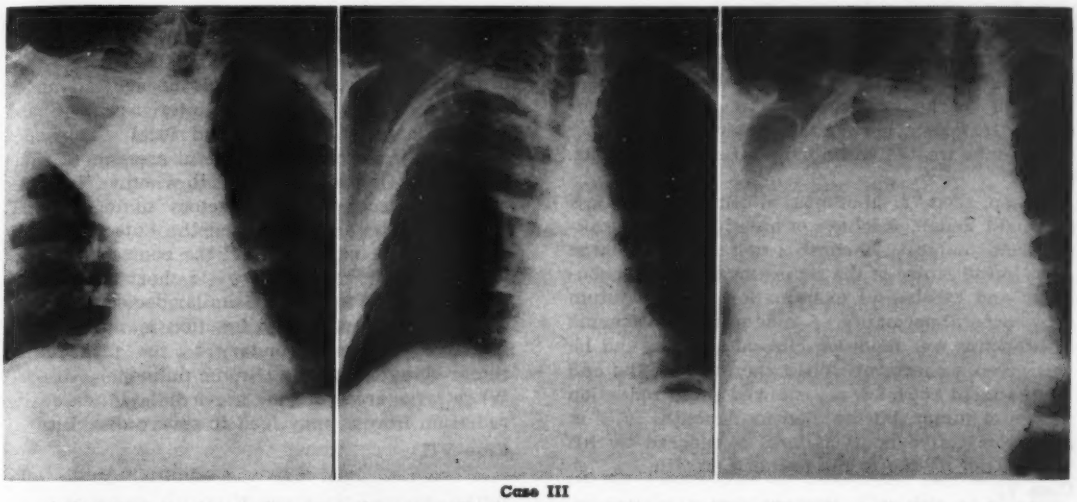
Left, before treatment; right, five months later showing regression of the density at the left lung root and clearing of peripheral changes.

Secondary Infection and Collapse of Lung

Tumors of the bronchus commonly cause collapse and secondary infection of lung. Shrinkage of tumor as a result of radiotherapy allows re-opening of a blocked bronchus and so re-aeration of lung and drainage from an infected area. Prolonged suppuration, however, will result in irreversible damage to the lung and the re-opening of a blocked bronchus may give no symptomatic benefit whatsoever. Prolonged inflammatory changes in relation to tumor may diminish the blood supply and this can be expected to result in diminished radiosensitivity. Further, such lung tissue is predisposed to severe irradiation fibrosis. A course of Cobalt therapy is commonly interrupted by flare up of the secondary inflammatory process. Great care is required in the management of such patients and supportive measures including antibiotics must be given. It is not surprising that the results of treatment where these conditions apply are often disappointing, but the outcome is difficult to predict with accuracy and occasionally a more satisfactory result is achieved.

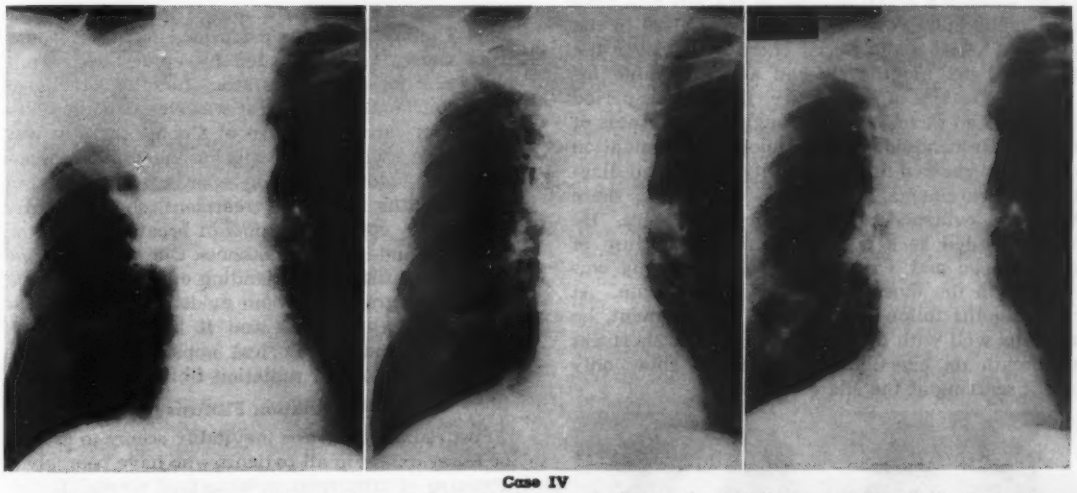
Case III

A man, aged 46, gave a history of pneumonia three and again two years prior to admission to hospital. A dry cough had troubled him for one year and shortness of breath and hemoptysis for one month. A chest x-ray showed collapse-consolidation of the right upper lobe with a dense shadow present at the hilum. Bronchoscopy revealed widening of the carina and a biopsy from the right main bronchus showed epidermoid carcinoma, grade II. He was considered inoperable and a course of Cobalt therapy was given. He remained well for three months after its conclusion, but there was no improvement in the radiological appearances. Increase of cough and shortness of breath then occurred and serial chest x-rays showed an opacity extending out from the right hilum until, finally, the whole right hemi-thorax was uniformly opaque. There was gradual decline with increasingly severe respiratory symptoms and before



Case III

Left, before treatment; there is collapse-consolidation of the right upper lobe with a dense shadow at the hilum. No improvement could be seen in x-ray picture taken at three months (centre) and there was later spread of opacity to include the whole hemithorax as shown in the film at ten months.



Case IV

Collapse-consolidation of the right upper lobe can be seen in the pre-treatment x-ray picture (left), those at one (centre) and at four months (right) after treatment show re-expansion of lung but also the changes of post radiation fibrosis.

his death, nine months after initiation of Cobalt therapy, extensive tumor was shown by bronchoscopy.

Case IV

A man, aged 72, on admission gave a three month history of recurring bouts of cough, sputum, night sweats and shortness of breath and malaise. X-ray of chest showed collapse-consolidation of the right upper lobe and a biopsy from the right upper lobe bronchus was reported as bronchogenic carcinoma. There was immobility of the carina, and he was considered inoperable. A course of Cobalt therapy was complicated by a flare up of the infective process in the right upper lobe and also by hemoptysis. Treatment was concluded at a low dose of 4500r. Following treatment there was marked symptomatic improvement and he gained twenty pounds in weight. Now, ten months after initiation of treatment, he has been admitted with hemoptysis and a further course of treatment is being given for recurrent tumor.

Peripheral Tumors

Patients with peripheral tumors are usually submitted to resection, but occasionally a patient showing poor respiratory function or poor general condition is referred to the Radiotherapy Department. These tumors tend to be well differentiated squamous or adeno-carcinomas and may attain

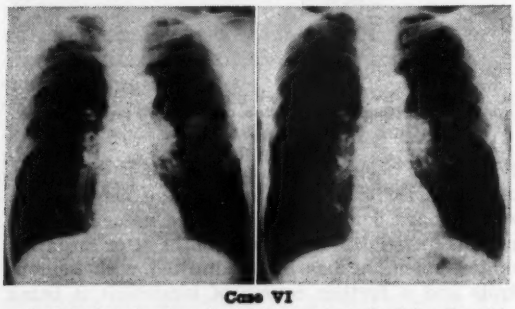
very large size by slow growth over many years. Treatment is often disappointing in the case of the very large tumors. The same reasons which render these patients unfit for surgery also make them unsuited for heavy irradiation of large areas of chest. However, peripheral tumors of moderate size may be treated with highly satisfactory results.

Case V

A man, aged 72, on admission complained of loss of weight, cough, shortness of breath, general weakness and malaise. A chest x-ray showed a large mass in the centre of the right lung field. Bronchoscopy and cytological examination of the sputum showed no abnormality. A diagnosis of carcinoma of bronchus was made on clinical grounds and he was given a course of Cobalt therapy. At the end of treatment repeat x-ray showed some reduction in size of tumor, but he died four months later in acute congestive heart failure, considered by his practitioner as due to the primary growth.

Case VI

A man, aged 70, complained of cough and shortness of breath on exertion for three months. Chest x-ray showed a small opacity in the left mid zone and tomography revealed that it was close to the posterior chest wall. Serial chest x-rays over the following six months showed a considerable increase in the size of the density. During this period there was an increase in his cough and shortness of breath. Bronchoscopy and cytological examination of sputum showed no abnormality. A clinical diagnosis of carcinoma of bronchus was made, there being no evidence for a primary elsewhere. He was regarded as a poor surgical risk because of emphysema, and a course of Cobalt therapy was applied to the mass and to the mediastinum. At nine months following initiation of treatment, he remains well with only slight cough and shortness of breath on exertion. Chest x-rays show only slight scarring at the site of tumor.



Case VI

Left, before treatment; right, three months later showing regression of the tumor in left lung field.

General Condition and Pulmonary Function

When a patient in fairly good general condition is given Cobalt therapy for a localized tumor in an otherwise normal chest, general systemic reaction is unusual. A few may complain of general tiredness and loss of appetite, and in some esophagitis may present a transient problem. These patients attend from their homes, and are often able to carry on part time at work. When the general condition is impaired as a result of age, advanced tumor, secondary infection or intercurrent disease, the incidence of systemic and local disturbance rises, and in such cases a careful assessment must be made at first attendance as to whether it will be possible to achieve a satisfactory tumor dose. If this cannot be achieved, then the object of treatment must be reviewed and the course either not given or modified so as to yield short term palliation of symptoms only. A similar decision must be made where respiratory function is impaired by infective changes secondary to the presence of tumor or by coexisting chronic pulmonary disease. When large areas of lung are irradiated, extensive radiation fibrosis may lead to severe disability.

Case VII

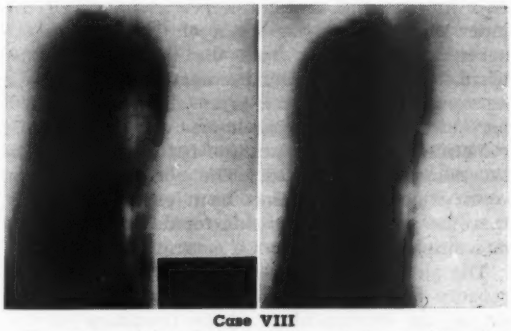
A woman, aged 65, was admitted to hospital complaining of shortness of breath on exertion for one year, also cough and pain in the left chest for five months. Chest x-ray and tomography showed an opacity 2.5 cms. in diameter in the left lower lobe. Thoracotomy was performed but hilar nodes were shown to be invaded by epidermoid carcinoma and impaired respiratory function precluded pneumonectomy. The chest was closed without resection of lung. A course of Cobalt therapy was given, but owing to the site of the tumor, a considerable volume of lung was irradiated. Now, eight months following treatment, she is greatly troubled by cough, shortness of breath, pain in the left chest and general weakness. Chest x-rays show extensive infiltration extending out in the left lung root. Tomograms show no evidence of the tumor seen before treatment, and it is felt that these symptoms and radiological appearances may be due entirely to post radiation fibrosis.

Radiation Fibrosis

Post radiation fibrosis inevitably occurs to greater or lesser extent in all patients who have been given a course of treatment as described above. Radiographic changes can in most cases be detected a month after treatment has been concluded, and they usually progress to a maximum at four to six months. The classic appearance is that of a fine reticulation but many variations occur and the appearance is often modified by pre-existing pulmonary changes. Some cough and shortness of breath may be related to these appearances, but severe symptoms may arise because of secondary infection in the area, and these will subside with antibiotic therapy. By the time radiation fibrosis has appeared, no modification can be expected with the use of steroids. The radiological changes of post radiation fibrosis are such that recurrent or residual tumor may be masked and, in many cases, only the clinical course can prove the true nature of the changes seen.

Case VIII

A man, aged 61, with carcinoma of the epiglottis but with no respiratory symptoms was submitted to routine chest x-ray on admission to hospital. A well defined shadow was visible above and lateral to the right hilum. At thoracotomy this was shown to be a squamous cell carcinoma—a second primary tumor. Lobectomy was not possible and pneumonectomy considered inadvisable in the circumstances and so the chest was closed. Both tumors were treated by Cobalt therapy with regression. Now, eight months after treatment was initiated he has gained weight, and a slight cough is his only respiratory symptom. The area of tumor is obscured on recent chest x-rays by post surgical and post radiation fibrosis. Tomograms showed the tumor to have regressed, leaving only changes which can be ascribed to fibrosis.



Case VIII

Tomograms taken before (left) and six months after (right) treatment show regression of tumor and production of radiation fibrosis.

Case IX

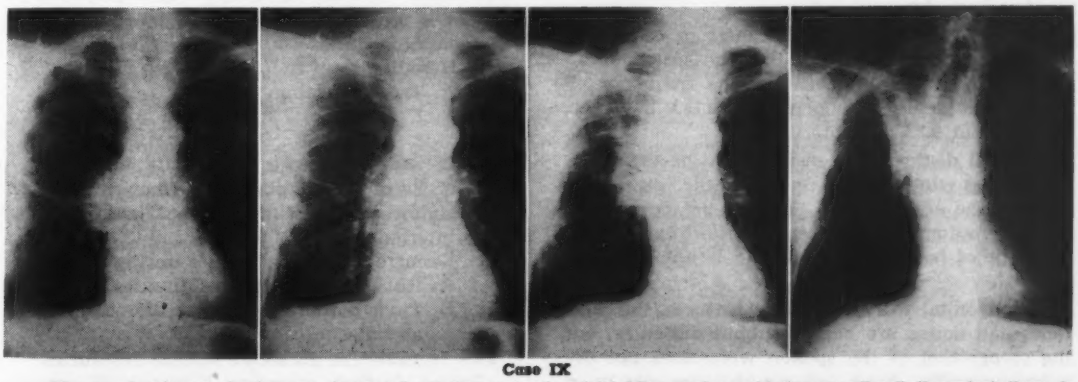
A man, aged 50, was admitted to hospital complaining of loss of weight, hemoptysis, cough, general weakness and malaise. Chest x-ray showed a large opacity at the right hilum and a biopsy from the right upper lobe bronchus revealed epidermoid carcinoma, grade II. Right scalene node biopsy was negative for tumor. At thoracotomy a large hilar tumor was found to be invading the pericardium. The pericardial cavity was opened, but the tumor was found to be invading and inseparable from the superior vena cava, and the chest was closed without further surgery. A course of Cobalt therapy was given to the primary tumor and mediastinum. There was marked symptomatic relief and he returned to full work as a paint sprayer. Now, one year after initiation of treatment, he remains well with slight cough as his only symptom and has gained 40 pounds in weight. Chest x-rays show regression of the tumor and the development of changes which are characteristic of radiation fibrosis, but in the most recent radiograph a rounded opacity gives suspicion of recurrence at the periphery of the treatment area.

Summary

When the initial response to treatment was assessed in each of the seventeen patients at four to six weeks after its conclusion, thirteen showed symptomatic improvement. One died at one week after the conclusion of treatment and the remaining three showed no significant change. In thirteen cases there was radiological improvement as shown by regression of tumor masses or re-expansion of collapsed lung. In the remaining four there was no significant change seen in the radiographs of chest.

At this time, seven to seventeen months after initiation of treatment in these cases, eight are dead, eight are alive and one is lost to follow up.

Of the eight who are now dead, three died with local recurrence in the chest at fourteen, nine and five months after beginning of treatment, three died as a consequence of distant metastases at six months, six months and five weeks. In the remaining two cases, whose death occurred at fifteen and six months, there were distant metastases but no information is available concerning the condition within the chest. Of the eight who are alive there is definite evidence or suspicion of local or distant tumor in three who are at twelve, ten and seven months after initiation of treatment. The remain-



Case IX

The pre treatment chest x-ray shows a large tumor in the right hilar region. At two months (left centre) there is regression and at five months (right centre) and at twelve months (right) post radiation changes are visible. In the last x-ray picture there is the suggestion of a rounded opacity at the periphery of the fibrotic area and this is now under observation.

ing five are clinically free of tumor at nine, nine, eight, eight, and seven months after treatment.

These results must be assessed against the highly malignant natural history of carcinoma of the bronchus and the unfavorable selection of the patients who were treated.

New apparatus such as the betatron (Haas et al 1957) and new techniques such as elevation of oxygen tension in tumor cells (Churchill-Davidson et al 1955) are likely to yield improvement but even with those presently available better results can be achieved by careful selection and planning, by the use of adequate dosage and treatment period and by complete day to day care and management during the course of radiotherapy.

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Otolaryngology

Classification and Diagnosis of Deafness

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A general plan of rehabilitation of the hard-of-hearing and the goals of otology were outlined in a previous communication. The present paper will deal more specifically with the types of deafness, diagnosis and general therapeutic and surgical measures for the relief of deafness.

Types of Deafness

1) Perceptive or nerve deafness.
2) Conductive deafness.
3) Mixed deafness.
4) Psychogenic deafness.
5) Cerebral deafness.

Deafness indicates a breakdown in the transmission system of the sound signal between the auricle and the acoustic cortex. The site of the breakdown determines the type of the resultant deafness.

Psychogenic dysacusis according to Fowler "is from a deficient auditory response engendered by the mind. In its broadest sense psychogenic hearing loss includes hysterical deafness, functional or emotional overlay, malingering, and psychosomatic hearing loss." Some of course will not concede that all these conditions should be lumped under psychogenic deafness. However, for the sake of brevity this has been done.

In the larger auditory rehabilitation centers it is estimated that one percent of the cases admitted have psychogenic deafness. The frequency of psychogenic deafness in private practice has been estimated at 0.33 percent.

Cerebral deafness is considered to be that type of deafness which occurs central to the spiral ganglion of the eighth nerve. It does not occur as a single symptom, and, perhaps, the best example of this type of hearing defect would be the result of syphilis.

In congenital word or speech deafness, the pure tones and noises are heard without difficulty, but the recognition of the spoken word does not develop normally. Such aphasic children can learn the meaning of the word with proper training, but do so slowly and with difficulty.

The above two groups are placed in the classification merely for completeness' sake. Their total numbers are rather small.

Perceptive deafness is the result of degeneration or injury to the sentient nerve elements of the inner ear, namely the organ of Corti; or in the nerve fibres leading from the inner ear to the brain, that is the acoustic nerve. The acoustic nerve upon entering the brain stem, splits and a portion ascends to the ipselateral cortex whilst the remainder crosses the midline before ascending to the contralateral cortex. The cortices therefore, receive auditory impulses from either ear. It is, therefore, highly improbable for deafness to occur as a single symptom from a central lesion.

The site of perceptive deafness, whether in the sensory receptor mechanism (the organ of Corti) or, in the retrocochlear fibres (auditory nerve), can usually be determined by recruitment tests as described by Fowler in 1936 and by the author in 1957.

Recruitment occurs when a lesion is confined to the organ of Corti and with rare exceptions the lack of recruitment in perceptive deafness, indicates a retrocochlear lesion, that is, a lesion in the acoustic nerve.

Perceptive deafness may be congenital or acquired. Congenital deafness may be biologic or pathologic and the following classification from Taylor is presented:

Congenital Deafness

I) Hereditary.
  A. True mendelian
    1. Dominant
    2. Recessive
  B. Erythroblastosis fetalis
  C. Secondary to other hereditary traits
II) Malformations of the external, middle or internal ear.
III) Occurrences in the mother during pregnancy.
  A. Rubella or other virus diseases.
  B. Toxic poisoning: quinine, the salicylates and alcohol.
IV) Intrauterine accidents and birth injuries.

Taylor further observes, "Thus it is evident, though not always realized, that all cases of hereditary deafness are congenital, but is likewise true

that congenital deafness is by no means always hereditary. It would appear also that any of these types of congenital deafness may be partial or total, unilateral or bilateral."

Perceptive or Nerve Hearing Loss
(Sensory-neural hearing loss)

1) Presbycusis
2) Acoustic trauma
3) Toxins
   Virus: e.g. mumps
   Meningeal infections
   Drugs: Quinine, streptomycin, dihydrostreptomycin, neomycin and kanamycin.
   Scarlet fever and measles.
   Syphilis
4) Vascular lesions
   Menières (idiopathic labyrinthine hydrops)
   Vascular accident: hemorrhage, thrombosis, emboli.
5) Tumours
6) Multiple sclerosis.

Conductive deafness implies an obstruction in the passage of sound waves to the inner ear and is always mechanical in origin. Insofar as there is no loss of cells in the receptor mechanism or in the nerve fibres, conductively deafened individuals can hear if the intensity of sound is sufficient to overcome the mechanical obstruction.

The obstruction may be in the external ear canal, middle ear or the eustachian tube.

A. External auditory canal

1. Impacted cerumen
2. Foreign bodies
3. External otitis
4. Congenital malformation
5. Tumours (benign or malignant)

B. Middle ear diseases

1. Secretory otitis media
2. Acute otitis media
3. Otitic barotrauma
4. Chronic otitis media
   a) Perforations in the ear drum
   b) Adhesions in the middle ear
5. Tumours
6. Otosclerosis
7. Congenital malformations of drum and/or ossicles
8. Congenital fixations of the stapes
9. Acoustic trauma
   a) Dislocation of the ossicular chain
   b) Rupture of the ear drum

C. Eustachian tube obstruction

In adults:

1. Tubal swelling
   a) Infective
   b) Allergic
2. Dysfunction of the mandibular joint
   a) Arthritic
   b) Traumatic
   c) Improper dental bite
3. Tumours in the nasopharynx

In children:

1. Hypertrophied or infected adenoids
2. Diffuse lymphoid hypertrophy
3. Tubal swelling
   a) Infective
   b) Allergic

Diagnostic Aids in Establishing the Anatomical Site of Deafness

1. Tuning forks
   a) Air conduction
   b) Bone conduction
2. Audiometry
   a) Air conduction
   b) Bone conduction
   c) Recruitment testing
3. Speech audiometry
   1. Whispered voice
   2. Speech audiometry
      Spondee words:
      Speech Reception Threshold (SRT)
      Phonetically Balanced words:
      Discrimination Test.

Weber Tests

This test is used to determine whether a unilateral deafness is conductive or perceptive in type. The stem of a vibrating 256 or 512 cycle tuning fork is held on the vertex. If the sound is lateralized to the diseased ear, the impairment is of a conductive type, whereas, if the sound is lateralized to the better ear, this would indicate a perceptive type of hearing loss.

Rinne Tests

This test compares the duration of bone conduction to air conduction. In a normal ear the air conduction is twice as long as the bone conduction $\left(\frac{\text{air } 2}{\text{Bone } 1}\right)$. The test includes the comparison of bone and air conduction for the frequencies 512 - 1024. Tuning forks of higher frequencies may be used. However, there is a tendency for the examinee to hear the higher frequencies via air whilst the examiner is attempting to determine the bone conduction.

A "Positive Rinne" indicates air conduction greater than bone conduction and this prevails in normal hearing and in the perceptive type of deafness.

A "Negative Rinne" indicates bone conduction greater than air conduction and this occurs in the conductive type of hearing loss. If bone conduction and air conduction are equal, it is usually found that both are reduced, and this generally indicates a perceptive type of hearing loss. It is important to recall that in mild conductive losses the Rinne may be positive, and generally, this test is not too reliable unless the air conduction is reduced at least 35 decibels.

Schwabach Test

In this test a comparison in the duration of bone conduction time in the patient is made with a normal hearing individual—frequently the examiner

The duration of bone conduction is generally accepted as a measure of cochlear function and a reduced bone conduction time implies a perceptive hearing loss. The ear, not being tested, of course, should be masked. Otherwise, the sound may be transferred through the skull and a record made not from the presumptive ear being tested, but from the opposite ear. Simple rubbing of the auricle not being examined is an effective means of masking.

Fairly reliable information can be obtained by the general practitioner with these tests and also with the word testing (to be described later) however, much more satisfactory and accurate information can be obtained with pure tone audiometry.

The Audiometer

This instrument generates acoustic, pure tones which can be varied in pitch and intensity. The frequencies are in multiples of 125 cycles, one octave apart. Graphic records are made indicating the loss by both bone and air conduction in decibels.

In simple language, a decibel is a measure of sound energy or a unit of sound sensation. The smallest difference in intensity of sound appreciated by a normal ear is called a decibel.

Speech Audiometry

Few sensations resulting from stimulation of special sense organs reach the conscious level from threshold intensities of stimulation. The ear is no exception; it rarely listens to sound of faint intensity, but is most frequently used to make intelligible the meaning of sounds which normally occur at 40-60 decibels above threshold. With the use of tuning forks, and for many years following the advent of the audiometer, the acuity of hearing was measured at minimal audibility, and little regard was paid to the ability of the patient to understand sound or speech at intensities well above threshold, indeed, at these levels where ordinary conversation is usually maintained.

Speech Reception Threshold (SRT)

This test utilizes spondee words. These are two syllable words such as railroad, boxcar, cupcake, drawbridge, etc. These are perhaps the easiest words in the English language to understand. The intensity of sound is gradually reduced until the patient scores 50 percent. The lowest decibel level at which 50 percent of the test words are repeated correctly represents the SRT score. The normal SRT is 10-20 decibels above the threshold for pure tones for the speech frequencies 500 to 2000 cycles. Generally speaking, in connected discourse, such as everyday language, a listener who can hear and understand half of what is said to him will be able to comprehend the meaning of the discourse.

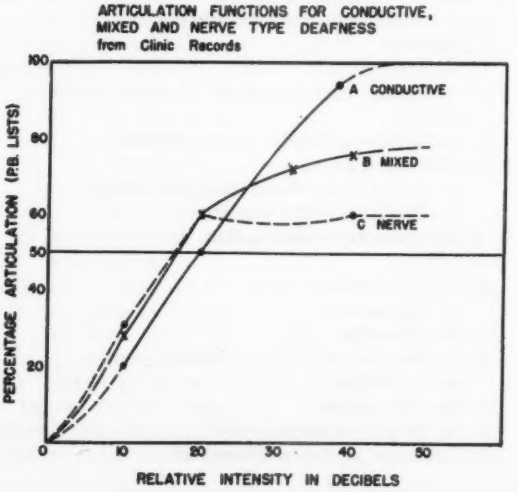
The Discrimination Test

A group of one syllable (Phonetically Balanced PB) words, usually 50 each group, are given at various decibel levels above threshold or the SRT levels and the results are recorded on a percentage basis. That is, 2% for each word heard and understood correctly. One list of such words follows:

1. Bat	14. For	27. Mush	40. Side
2. Beau	15. Gem	28. My	41. Sled
3. Change	16. Grape	29. Nag	42. Smash
4. Climb	17. Grave	30. Nice	43. Smooth
5. Corn	18. Hack	31. Nip	44. Soap
6. Curb	19. Hate	32. Ought	45. Stead
7. Deaf	20. Hook	33. Owe	46. Taint
8. Dog	21. Jig	34. Patch	47. Tap
9. Elk	22. Made	35. Pelt	48. Thin
10. Elm	23. Mood	36. Plead	49. Tip
11. Few	24. Mop	37. Price	50. Wean
12. Fill	25. Moth	38. Pug	
13. Fold	26. Muff	39. Scuff	

If audiometric equipment is available a very accurate deduction may be made regarding the patient's ability to hear and understand speech at above threshold levels of sound intensity. However, for practical purposes, the practitioner can obtain a fairly accurate picture of the patient's ability to discriminate words by raising the voice while delivering these Phonetically Balanced words and recording the results in a percentage fashion. In general terms, it may be said that a score of 90 percent or more is normal. If, despite increasing the intensity of the sound delivered to the ear, the PB score is in the neighborhood of 50 percent to 80 percent then the cochlear function is defective and this is indicative of a perceptive type of hearing loss.

This type of testing is of particular value when contemplating surgery such as stapes mobilization or classic fenestration surgery. If amplification of sound, delivered to the ear increases the PB score of the individual, then it may be presumed the inner ear and nerve fibres are in a reasonable physiological condition. If such be the case, a socially acceptable post-operative level of hearing may be anticipated before surgery is advised. This is particularly true of fenestration surgery. It is a reliable procedure, and a post-operative level of hearing can be prophesied with reasonable accuracy from the correlated information derived from the basic air and bone conduction audiogram



plus the results of discrimination testing with Phonetically Balanced words. Likewise, in instances where surgery is not the preferable method of rehabilitation, the success of a hearing-aid may be anticipated with reasonable accuracy.

In the above graph it is evident that the PB score has increased in the conductively deafened individual with amplification of sound. In a nerve deaf patient, on the other hand, increasing the amplitude of sound does not increase, noticeably, the percentage score of the PB words. The curve in mixed deafness will lie part way between a conductive deafness and a nerve type of lesion.

Mixed deafness implies there is an element of conductive loss associated with a decrease in cochlear function. Clinically, this type of hearing loss is more difficult to diagnose without the aid of an audiometer and speech tests.

In summary therefore, in perceptive deafness, there is a loss of some cells in the sensory receptor mechanism of the inner ear or a decrease of a nerve fibre population of the acoustic nerve, and such individuals have a loss of discrimination particularly for the spoken word. Such individuals may say, "Doctor, I can hear you but I can't understand you," or, "I am alright talking to one person, but I am lost at the theatre, church, or at a meeting. I just can't understand what people are saying."

The conductively deaf patient on the other hand has no loss in the nerve fibre population and the sensory receptor mechanism of the inner ear is intact and it is only necessary to overcome the mechanical obstruction causing the deafness in order for such individuals to hear, understand, and discriminate the meaning of the spoken word. These individuals therefore, can hear well in noisy environments, e.g. a cocktail party, in industry, and they generally hear quite well on the telephone. This indicates that such individuals may be rehabilitated by removing the mechanical obstruction with surgery or, in many instances, overcoming the mechanical defect with the amplification obtained from a hearing-aid.

Mixed type of deafness is present in our communities in large numbers and very frequently is profound in character. Until recently, this type of deafness could not be helped sufficiently with a hearing-aid and/or surgery.

The inner ear has a definite upper limit of sound tolerance, usually about 100 decibels, and any increase in intensity above this level cannot be tolerated by the patient. This means that there is a very definite upper limit of amplification which may be used in a hearing-aid and still remain within a level of tolerability by the patient.

The average hearing-aid will reproduce with reasonable fidelity, an amplitude gain of 40 - 50 decibels and therefore, cannot reach the threshold of these severely deafened individuals. The hearing-aid turned up to its full amplitude frequently distorts the sound and adds further to the troubles of the already profoundly hard-of-hearing. In addition the hearing-aid, when overloaded, magnifies the environmental sounds to such an extent that it pervades the room and the wearer of the hearing-aid because of this disturbance is sometimes shunned by his associates.

The effective area of the ear drum is 60-70 square millimeters and the surface of the stapedial footplate about three square millimeters or perhaps a little larger. The transmission of sound waves from an intact ear drum and ossicles involves an important increase in sound pressure delivered to the inner ear. Sound pressures from the ear drum and augmented by the lever action of the ossicles is offered to the stapedial footplate with an increase of about 20-30 decibels.

Any surgery or disease which destroys the integrity of the ear drum and/or the ossiclear chain must, perforce, leave a residual hearing loss of 20-30 decibels.

Classic fenestration operations which involve the loss of integrity of the ossiclear chain result in a threshold of hearing in most cases no better than 20-25 decibels below normal. The gain from classic fenestration surgery, magnificent as it is for pure otosclerotic conductive deafness, cannot raise the threshold sufficiently, in the severe mixed deaf case to a socially acceptable hearing level.

The stapes mobilization, if, and when, it is successful has the potential to overcome the stapedial or conductive component of the mixed deafness and thereby, restores the hearing loss to the limits of the cochlear potential. If, and when, this is accomplished, the patient may be restored to a socially adequate level of hearing, or may be able to use a hearing-aid to a greater advantage and less discomfort due to the amplified state being within the limits of sound tolerance of the human ear.

Perhaps, time will indicate that this type of hearing loss will prove most amenable to stapes surgery; at any rate, patients with a mixed type of deafness can now look forward to more help than was previously available with the use of hearing-aids and/or surgery.

The treatment of perceptive or nerve deafness is on the whole very disappointing. Once the nerve tissue has atrophied, degenerated or has been destroyed, there is no hope or regeneration. The one exception to this is Meniere's disease, or hydrops of the labyrinth in which there is a dilation of the cochlear duct and the cell mass of the organ of Corti is compressed and the Corti's tunnel may be occupied by a structureless coagulum. In addition, the normal staining qualities of the cytoplasm and nuclei may be obliterated. Histological changes have not been apparent in the peripheral cochlear nerve fibres or in the cells of the spiral ganglion

Initially, the pathological process may be reversible and may account for the remissions which are so common in the symptomatology of the disease.

From a medical point of view, the best treatment for perceptive deafness is prevention. This applies particularly to congenital deafness where every means must be taken to prevent accidents and virus infections to the mother during the first month or two of pregnancy. Ototoxic drugs should not be prescribed for the pregnant female without due thought and deliberation. It is not necessary to deliver atomic therapeutic capsules to destroy minor infections. The judicious abstinence of ototoxic drugs to the pregnant woman should not be forgotten.

In adult life, one great source of nerve deafness is that resulting from the acoustic trauma of high noise levels in industry. Industry is becoming conscious of this fact and is making worthwhile attempts to reduce noise levels in the factory, or to supply the workman with some ear protection.

The general practitioner, the internist and the pediatrician, as well as the otologist, should all be aware of the effects of some drugs on the sensory mechanism of the inner ear. Boies states, "Sensory-neural loss of hearing associated with administration of streptomycin and dihydrostreptomycin is not uncommon, and the individual susceptibility varies within a wide range. Dihydrostreptomycin is more toxic to the auditory mechanism than streptomycin. Streptomycin usually damages the vestibular apparatus selectively, but hearing may be affected. This selectivity for the vestibular apparatus is taken advantage of in using this drug as a means of therapy in certain cases of Meniere's disease. Dihydrostreptomycin usually causes hearing losses rather than vestibular loss unless it is used in very large doses, but it may cause a loss of hearing weeks and even months after therapy is stopped. This may occur in susceptible individuals when as little as 2.5 gm. is given for prophylaxis.

Neomycin has a severe otoxic action and should never be used systemically, except as a life saving measure, or when the hearing is already absent. Experimental studies indicate that the sensory epithelium of the cochlea (inner and outer hair cells) is first affected, and that degeneration of the nerve tracts is the final stage of the toxic process. The new antibiotic Kanamycin, has also been found to be ototoxic.

Hawkins recently stated, "In cats, Kanamycin produced cochlear effects ranging from selective depression of the microphonic response to complete loss of all cochlear potentials. The organ of Corti appears to be the primary site of action of the antibiotic, but degeneration of the ganglion cells and the nerve fibre can occur."

"Rats seem to be less susceptible to Kanamycin than either cats or guinea-pigs. Recruitment does not appear to be a feature of the impairment caused by Kanamycin. Among seven cases tested by binaural or monaural loudness matching procedures, none showed evidence of recruitment. It appears therefore, that in man, the Kanamycin lesion may not be confined to the organ of Corti, but may extend to the auditory nerve and perhaps beyond."

The family of basic streptomyces antibiotics will undoubtedly grow as more investigators discover more distant relatives of the basic drug. It is peremptory that the ototoxic qualities are firmly determined by animal experimentation before the drug is used in the treatment of human diseases.

Scarlet fever and measles usually produce a conductive type of hearing loss, however, on occasions there is an associated labyrinthitis with a sensory-neural loss which produces a perceptive hearing loss. Syphilis may cause a perceptive type of hearing loss directly as a result of a labyrinthitis or as a result of heavy metals used in therapy, and late congenital syphilis is said to cause a degeneration of the nerve elements of the inner ear.

Insofar as conductive deafness implies an obstruction in the passage of sound waves to the inner ear and is always mechanical in origin, the treatment is likewise mechanical and entails removal of the obstruction whenever possible; bypassing it on occasions, or repair of the diseased tissue causing the defect in the transmission system.

In summary, the treatment of conductive deafness is as follows:

External ear canal and eustachian tube—remove the obstruction.

Middle ear:

A) Chronic otitis
   1. Repair ear drum with tympanoplasty.
   2. Mobilization of stapes or prosthesis to replace the diseased ossicles.
   3. Mechanical amplification with a hearing-aid.

B) Otosclerosis
   1. Classical Lempert fenestration.
   2. Rosen stapes mobilization procedure or a modification.
   3. Mechanical amplification with a hearing-aid.

Insofar as there is no loss of cells in the receptive mechanism or in the nerve fibres, conductively deafened individuals can be made to hear if the intensity of the sound is sufficient to overcome the mechanical obstruction; or if the mechanical obstruction can be removed or bypassed surgically.

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The Manitoba Conference on Education

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The activities of the Manitoba Council of Education are of interest to all people of Manitoba. It is, perhaps, not surprising that medical men of this Province are vigorously participating in its proceedings. The importance of education is obvious to the most unlettered in this age of technological advances. In the frightening contest of missilry and industrial production, the man of science and the education that produced him, are assuming an increasingly significant place in our society. The governed intellect of the well educated man will prepare him to deal with the yet unknown forces of the years to come. We must inculcate methods of thought and discipline which will prepare him to take his place in a world shrunk by technology. How best should we prepare that priceless heritage, the minds of our children, for their awesome and stupendous future?

The Manitoba Council on Education has recently been formed "to assist through study and publicity the development of Education in Manitoba, and to co-ordinate, where appropriate, the activities of other organizations in the field." It is affiliated with the Canadian Conference on Education which is a national organization endeavouring to ensure the continuing interest and support of education by all Canadians.

The First Manitoba Conference on Education was held on February 27th, 1960 at the University of Manitoba. This was the first task undertaken by the Manitoba Council on Education. Perhaps the most striking thing obvious to all who attended was the general interest in the problem of education. That nearly 1100 people in all walks of life would find the time and desire to come, some from considerable distance, must have been extremely encouraging to the Committee who arranged the Conference. In a program taking the whole day there was no evidence of deterioration in this interest. The afternoon meeting was as well attended as that in the morning.

The Chairman, Dr. P. H. T. Thorlakson opened the Conference at 9.30 a.m. He dealt briefly with the origin and purpose of the Manitoba Council on Education. He mentioned the enthusiastic and generous support given to the parent body, The Canadian Conference on Education.

The Manitoba Council on Education was formed on December 10th, 1959. It has had the encouragement of other organizations interested in Education. Its avowed purpose has been stated and its first task has been to organize the First Manitoba Conference on Education.

The Honorable Stewart E. McLean, the Minister of Education for Manitoba briefly addressed the Conference. He commented that on the platform with him were all three Deputy Ministers of Education, past and present. These included Dr. Robert Fletcher, the first Deputy Minister when the Department of Education in Manitoba was created in 1908.

The highlight of the morning was the address by Dr. Wilder Penfield, the Honorary Chairman of the Canadian Conference on Education. His address set the tone for many of the subsequent discussions. The refreshing personality of this eminent neurosurgeon soon had the entire audience enthralled. The title of his address was "Education in Long Perspective."

He stressed that the resources of the mind were infinitely more important than the natural wealth with which a generous Creator has so liberally endowed our country. He commented on the remarkable upsurge of interest in this problem. Money is not all that is necessary to provide better education in Canada. We must examine the defects in our educational system. When he mentioned the recommendations of the Manitoba Royal Commission on Education I wondered how many of us had read the comprehensive 284-page report.

Dr. Penfield emphasized however that the school is only one element in the larger process of education. The development of the child requires contributions from the home, the society and his church. Though the topic of the Conference was "what shall we teach our children in our schools" other topics as "what shall we teach our children in the home" are equally important.

He mentioned how we all ultimately specialize, but the aim of our education system should not be to create specialists but to plan a broad curriculum requiring hard work and giving the student a general education. It should permit him "to look out on the world through many windows." He felt however that the most disrupting influence on Canadian Education was to be found in Canadian homes rather than in Canadian schools.

He reminded us of the great furor when Darwin first proposed the Theory of Evolution. The rigidly held religious convictions of the time appeared to have been refuted by these theories and Society reacted by displays of emotionalism and bigotry. Now we know that there is no contradiction between science and religion. Our attitude on education is often influenced by preconceived concepts which are the result of our upbringing and poorly considered religious convictions. He didn't exactly say so, but I felt that he longed for the release of our attitudes on education from the long engendered dogmas and prejudices that curb clear thinking. How can the artist, finding emotional ecstacy and satisfaction in his interests, hope to

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convince the practical engineer of the value of that phase of education? Dr. Penfield is the opponent of pragmaticism. Opinions must be honoured, but they cannot be made the shackles that keep the mind of man the petty duplicate of the society that raised him.

The speaker now moved to the discussion of bilingualism. He commented on the historic acceptance of more than one language in the societies of the past. He mentioned the child's ability to easily grasp the essentials of multiple languages whereas the adult had to laboriously approach each new language in terms of his mother tongue. The indirect method of teaching languages by word lists and grammar is now nearly standard. He stressed that true bilingualism could only rarely be achieved by this method. He urged that the young child should be exposed early to a second language and preferably by direct methods similar to those used in the acquisition of his mother tongue.

The direct method is being used in some areas to enable children gradually to acquire facility in French by spending relatively short periods each day with a teacher who speaks only in French. Fundamental is the early exposure of the child, even at four or five years of age to a second or even a third language. The acquisition of vocabulary and grammar can come later.

Dr. Penfield agreed with the practical aspects of education and with the concept of acquiring a sound basis in the core subjects, history, geography, mathematics, English literature, and sciences. We must not lose sight of the purpose of education to open the windows of the mind. Science should begin in the closing years of high school and specialization should be reserved for the technical school and the University. Before that we should try to nurture the mind and develop the body. Bilingualism must be taught at a very early age when the child still has his genius for languages. He must learn discipline and hard work. Stimulation is not the responsibility of the school alone, the child needs the encouragement of the home and the help of his church.

The next phase of the Conference was the group discussions on a variety of selected topics. Ten topics were assigned to 24 different groups of about 30 to 50 people who moved now to indicated areas on the campus. The topics discussed included "what should be the objectives of education?" "How far should the curriculum reflect social needs?" "Should courses in religious education form a part of the curriculum in public schools?" "Do we teach languages other than English adequately?" I had chosen the last topic. The groups were probably larger than expected and the acoustics in our area left something to be desired. I suspect that the enthusiastic attendance had far exceeded the expectations of the committee that organized the Conference.

Dr. Penfield had set the note for our discussion and many aspects of the question were threshed out. The matter of qualified teachers was raised, but the problem seems to be the teaching of languages at a considerably earlier stage than our present formal schooling. One person referred to certain European language schools that can impress a moderate grasp of a language on adults even in six weeks time. We did not learn the conclusions, if any, of the other discussion groups. Perhaps the main thing was the active participation of a great many people in a problem that must be approached and shared together.

After lunch the Conference reconvened in the Auditorium of the Residence of the University of Manitoba. One might have expected that after a rather strenuous morning that there would have been some depletion in the attendance. However, such was not the case and the room was just as well filled as in the morning.

The afternoon program was a panel discussion on "What Must We Teach Our Children In Our Schools?" The chairman was Mr. Justice A. M. Monnin of Winnipeg. Members were Miss Helen Marsh of Dauphin, editor of the Dauphin Herald, Dr. R. O. MacFarlane, of Ottawa, chairman of the Manitoba Royal Commission on Education. A medical man, Dr. D. W. Penner who as well as Pathologist to the Winnipeg General Hospital and on the staff of the Medical College is the Chairman of the St. Vital School Board, was another member. Miss Sybil F. Shack, principal of Lord Roberts School ably presented her views as a practising educationalist. It is difficult to condense intelligibly the two hour discussion which followed. Mr. Justice Monnin began by suggesting that our educational system is failing; that it is not tough enough, not demanding enough, perhaps it is too American, has too many frills. He suggested that perhaps we should concentrate on fundamentals and not frosting.

Dr. Penner began with a discussion of the primary aims of education. The product of our system must be able to make his own choices, use his own judgment, make his own decisions. He felt that parents were often too opinionated without adequate consideration as to the proper method of education. He thought that the school trustees were often lacking in providing guidance and leadership. More thought must be given as to what are our objectives. Miss Shack suggested that Society has set a standard that the end product must fit. Often we don't want children to make their own decisions; rather we prefer that they make the decisions of which we approve. Dr. MacFarlane said that there are some areas where we don't want the child to think but to believe. He mentioned traits such as honesty. We must define our spheres. However we just don't train children to earn a living. Miss Marsh stated that despite this emphasis we must judge the end product in terms of its capacity for

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business. She said, however, that, though business might criticize the graduated scholar, it must leave the educationalists to correct the deficiencies in the education.

The panel now began to discuss "fundamentals" in education. Miss Shack suggested that the designation of absolute standards is the problem. Can we arbitrarily decide what is a "frill?" Dr. MacFarlane thought that we should refer to tools of learning rather than to fundamentals. The pupil needs proficiency in certain tools to become educated later. Miss Marsh contended that we expect the graduate to be trainable for any particular vocation. She deplored the spelling facility of some of her prospective employees. Miss Shack suggested that the new crop, not instructed in phonetics, will do better.

Mr. Justice Monnin attempted to get the panel back to defining fundamentals. Dr. Penner agreed since the time available to the school represented only one seventh of the child's life that we must concentrate on fundamentals. Miss Shack felt that it is not so important what you teach, but how you teach it, and how you teach the child to handle it. Dr. MacFarlane felt that we have neglected "tool" subjects for other things. On being requested to define "tool subjects" he said, "what we have to master to work into other fields; reading, writing, elementary calculation." Miss Shack felt that, though tool subjects are essential, she knows examples such as a girl completely incapable of calculation satisfactorily making change as a cashier in a busy restaurant. Important too, she feels, is articulation of expression, the ability to carry on an intelligent conversation.

"Frills" were discussed. Dr. MacFarlane felt that they were the things you don't think necessary. However one thing may not be unnecessary in all circumstances. Miss Shack suggested that Dr. Penner felt that there was not enough attention to basic material in the curriculum, while Dr. Penfield complained of not enough enrichment. She felt that too much routine would kill education for the student. She commented that what Society thinks is important is taught, which might even be baton twirling in some societies. She concluded that what we need is careful and continuous re-evaluation and we must plan for the future. We are not progressive enough.

Miss Marsh commented that the present program of social studies is just a "glorified scrap book effort." She felt too that the terminal course not leading to University entrance is in danger of becoming a "frill" course. Dr. MacFarlane asked if she suggested that we just put those students out of school entirely. Miss Shack rejoined that Social Studies was a study of man's relationship to his environment in time and space. It includes history, economics, sociology, general science, all in an organized program. Dr. MacFarlane suggested that there was the danger that when a complex subject is rendered intelligible for the youngster that it becomes meaningless. Miss Shack agreed that one couldn't expect adult comprehension from a child. She felt, however, that the program where history and geography were learned separately was much more unsatisfactory than when they were combined into a co-ordinated course. Dr. Penner wondered how well it was done and suggested that it was a matter of relative value.

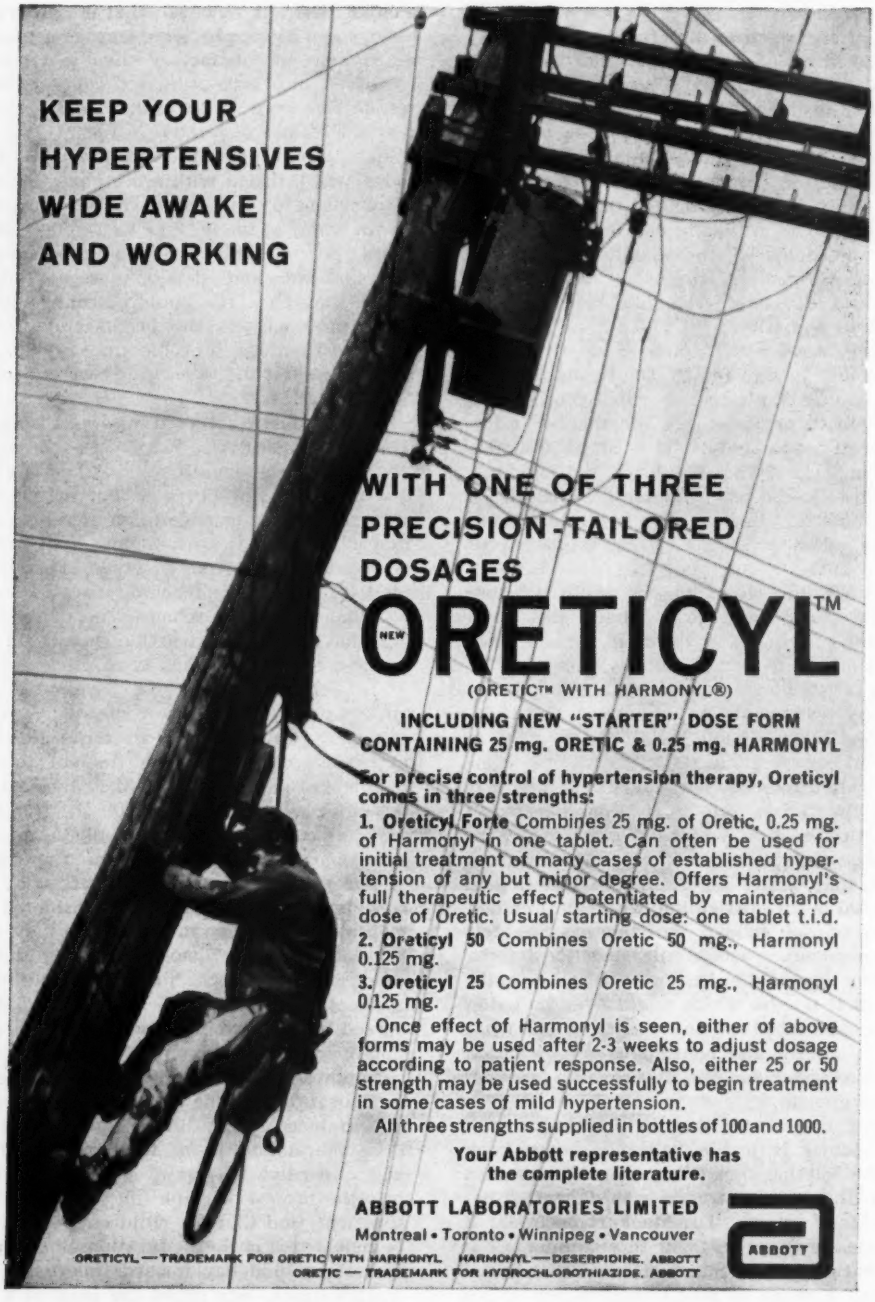
Miss Marsh now inferred that the student of today was satisfied with a minimum of effort. Dr. MacFarlane felt that there was not enough demand on the child at home, that he was not adequately challenged. Miss Shack felt that one problem today was that substandard people were filling jobs to which they formerly would not have aspired. Another problem was the bright child satisfied by doing just nothing, a problem not previously recognized. She felt that television was not particularly detrimental.

The panel now accepted questions from the floor. The first raised was why does the curriculum avoid any discussion of religion and sex? The sex question was not pursued, but other registrants strongly pressed consideration of religious instruction in school. It was obvious that considerable personal feelings were involved. Miss Shack contended that they are teaching morals in school. She felt that the public school is no place for dogma, and that religious instruction should not form part of the school curriculum.

Mr. Justice Monnin now terminated discussion on this point, but two more questioners insisted on returning to it. He asked for a question on "frills" in education. Miss Marsh thought that physical health was important. Dr. MacFarlane referred to the objectives of education; for the transmission of our culture, the development of the mind, the development of charcter and training to earn a living.

A registrant commented that what are now considered frills may later be considered as fundamentals. "Education must free the individual to be adaptable" (Miss Shack). Another thought that there was too much homework and not enough application expected in school. Dr. MacFarlane agreed that the problem was often lack of application of the child.

Another registrant felt that one of the problems in Education was the unqualified teachers we permit to teach. Miss Shack agreed that we must raise the standards for teachers. She felt that it was expensive to recruit poorly qualified people into the profession. She felt that they were often transient, and that the children were in danger of being cheated in their education. She applauded the increasing tendency towards insistence on proper qualifications. She urged the ideal of a university degree as minimum qualification. Dr. MacFarlane stated that the Royal Commission suggested larger school districts and graded schools as one measure to improve the situation.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Another asked should not more time be spent in high school on history and economics to better prepare the student to take his place as a voting citizen. Dr. MacFarlane felt that there were five main areas in the secondary school curriculum; mathematics, science, social science, English, and a second language, all being of approximately equal value.

Dr. P. H. T. Thorlakson now returned to the platform and asked Dr. H. H. Saunderson, President of the University of Manitoba, to close the meeting. The latter was impressed by the earnestness of the discussion groups in their deliberations. He felt that the purpose of the meeting was to develop interest in Education and thought that it had done so beyond all expectations.

Conclusion

An attempt to give a personal account of the recently held "Manitoba Conference on Education" has been made. It is felt that physicians of this Province should be as vitally interested as any other parent and citizen.

Old Wine in Old Bottles

The study of medical history is the mental discipline whereby the knowledge of the past lends understanding to the present and to the future. Through such study the mind learns to evaluate scientifically the essential problems involved in medical thinking, and to elevate the purely technical approach by the application of logic and philosophy. If the library is to fulfill its function as "the basis of all teaching and study . . . and the essential condition of research" (University Grants Committee), it may be expected to provide historical material according to the resources at its disposal.

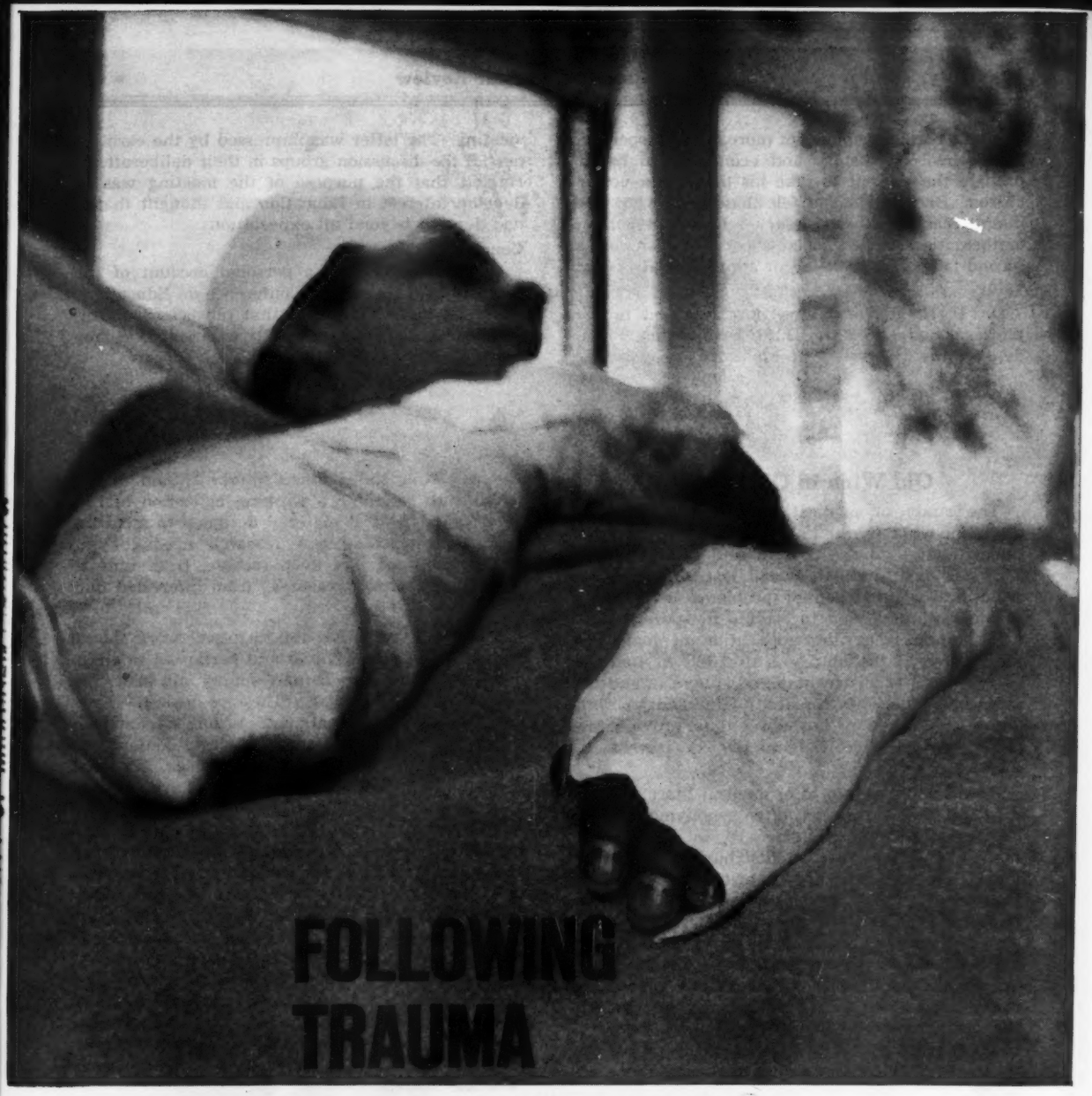
However, in the world of medical literature, the rare and the historical are often synonymous. Since classical works in medicine are, in many cases, rarities, and since every contribution to medical knowledge is potentially of historical value, the collector is faced with the difficult problem of defining and limiting his area of interest. In this respect, it is possible to make an elementary distinction between the rare book and the historical or classical title. The most obvious concept of rarity is based on scarcity of supply and value in the market place, whereas the classical work is usually in good supply and is chiefly prized for its intellectual content rather than any monetary worth.

It is with these distinctions in mind that librarians shape their policies for the acquisition and housing of rare and historical titles. Classical works may be collected in modern cheap editions or facsimiles, which, for all practical purposes, are as good as originals. That is, they furnish the text for the scholar, provide useful notes and references, and may be used for exhibits and displays. Besides acquiring titles through planned purchase, many libraries have benefited from the generosity of individuals who donate their private collections, or make financial contributions to encourage activity in this field. Also, large and well-established libraries often present valuable duplicates from their own shelves to smaller and less-favoured institutions. Thus the average library should find it possible to assemble a working collection of historical and classical material designed to meet the immediate teaching and research needs of the public it serves, and even receive, from time to time, unexpected "treasures" from interested outside sources.

To be most effective, the historical work should be placed on open shelves and permitted to circulate freely. It is in adequate supply and losses are relatively easy to replace. The rare book, however, requires different treatment. It has an extrinsic value over and above its intellectual content and may be difficult or impossible to replace. For these reasons, and also because it may have suffered deterioration through the years, preservation takes precedence over circulation. Generally speaking it should be shelved in a separate location under conditions of maximum security and limited use. This is not to suggest that rare books should be kept permanently behind locked doors in a state of "splendid isolation." Indeed, it is perhaps difficult to justify even the existence of such titles in the ordinary medical library unless they are made readily available to suitably qualified persons. At the same time, the library is morally obligated to protect the rare book from its natural enemies, whether they be damp, dirt, insect life, or inconsiderate readers.

Many libraries receive special funds to be used for special purchases, such as the historical and rare book collection. For many years the Medical Library of the University of Manitoba has enjoyed the use of such a special fund, due to the continuing and generous interest of W. McG. Rait, esq., of Winnipeg. Mr. Rait's financial support has made it possible for the library to add to its shelves a considerable number of very interesting rare books, such as the following:

Aphorismes de Monsieur Hermann Boerhaave sur la connoissance et la cure des maladies. Boerhaave (1668-1738) was the leading practitioner of his day and enjoyed a great reputation during his lifetime, although he is chiefly remembered now as



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1. Richardson, M. E.: J. Am. Osteop. A. 57:562 (May) 1958. 2. Mason, M. L.: Northwest Med. 57:1499 (Nov.) 1958. 3. Coleman, S. S.: Am. J. Surg. 97:43 (Jan.) 1959.

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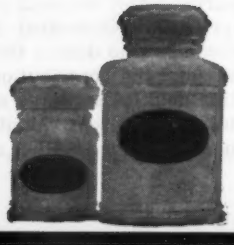

a teacher. Cullen, Pringle and von Haller were among his celebrated pupils. His writings exerted an enormous influence throughout the 18th century. This title, originally published in Leyden in 1709, is considered to represent one of his best works. Our copy is the 1739 Paris edition.

Opera chirurgica de Fabricius ab Aquapendente. Girolamo Fabrizzi (1533-1619), more often called Fabricius, was a pupil of Fallopius, and, in his turn, the teacher of Harvey. The anatomical theatre in which Morgagni worked was built by Fabricius at Padua. He was the author of many important treatises on a number of medical subjects, including anatomy, embryology, physiology and surgery. This title, which appeared in 1723, is the best Latin edition of his works, and illustrates a number of the surgical instruments and orthopaedic appliances which Fabricius invented.

De mulierum organis generationi inservientibus tractatus novus, by Regner de Graaf. de Graaf (1641-1673) was an early investigator of the pancreatic secretion and the genito-urinary system. He is remembered for his detailed and precise descriptions of the organs of generation, which he knew more exactly than anyone before him. This title, a first edition published in 1672, demonstrated ovulation anatomically, pathologically and experimentally. Here also is contained the first account of the vesiculae Graafanae, so named by von Haller in honour of their discoverer.

Medicinal experiments: or, a collection of choice and safe remedies, for the most part simply and easily prepared; very useful in families, and fitted for the service of country people; by the Hon. Robert Boyle, esq. Boyle's (1627-1691) contributions to science were numerous and covered many fields, perhaps the best known being the gas laws which bear his name. His medicinal recipes have perhaps not withstood the test of time so well, but nevertheless have a certain charm of their own. Consider the following examples:

"For those requiring an external Medicine against the Agues.

"Take five, seven or nine (for 'tis pretended it must "be an odd number of Roots of Ribwort, and having "made them clean, put them into a little Bag of "Sarsnet or fine Linnen, and, let the Patient wear "it upon the nape of his Neck, renewing it within "two, three or four days if need require.

"An Experienc'd Medicine for the Pain of the Haemorrhoids.

"Take the sole of an Old Shooe, worn by some Man "that walks much, cut it in pieces, and burn it, not "to white or grey Ashes, but to a fryable and ten-"der Coal; reduce this to impalpable Powder, and "then with a sufficient quantity of unsalted Lard "make it into an Unguent, wherewith the Part "affected is to be annointed from time to time.

"To stench Blood falling from the Nose, by a Simple held in ones hand.

"Let the Patient hold Knot-grass and Solomon's "Seal in his hand till it grow warm there, or longer "if need be.

"An experienced Magnetical Cure of the Yellow-"Jaundies.

"Take the Gall Bladder of a Sheep, and near the "top, without emptying the Liquor, make a small "hole, at which put in two or three drops of the "Patient's warm Urine; then tye up the upper part "of the Bladder, and hang it in the free Air till it "dry up, etc.

"Another Medicine to increase Milk in Nurses.

"Take Earth-worms, wash them well, freeing them "carefully from their Excrements, and from all ad-"hering Earth and Filth. Then dry them so as they "may not stink, and yet be pulverable. Of these, "reduc'd to Powder, give half a Dram or two "Scruples for a Dose, in Wine or any other proper "Vehicle.

"An Uncommon, but Experienc'd Remedy for "Dysenterical Fluxes.

"Take the Bone of the Thigh of a hang'd man "(perhaps another may serve, but this was still "made use of) Calcine it to whiteness, and having "purg'd the Patient with an Antimonial Medicine, "give him one Dram of this white Powder for one "Dose, in some good Cordial, whether Conserve or "Liquor."

The study of medical history brings its own rewards—cultural and humourous—but it may also be put to practical uses. If the influence of past discoveries on present-day principles is to be properly appreciated, then it is surely more desirable to read the reports in the original and not be content with the paraphrased accounts found in secondary sources. The study of medical history reveals the ideas and thinking that made the advancement of medical science a reality. In the words of Sir Winston Churchill, addressing the Royal College of Physicians, in 1944: "The longer you can look back, the further you can look forward."

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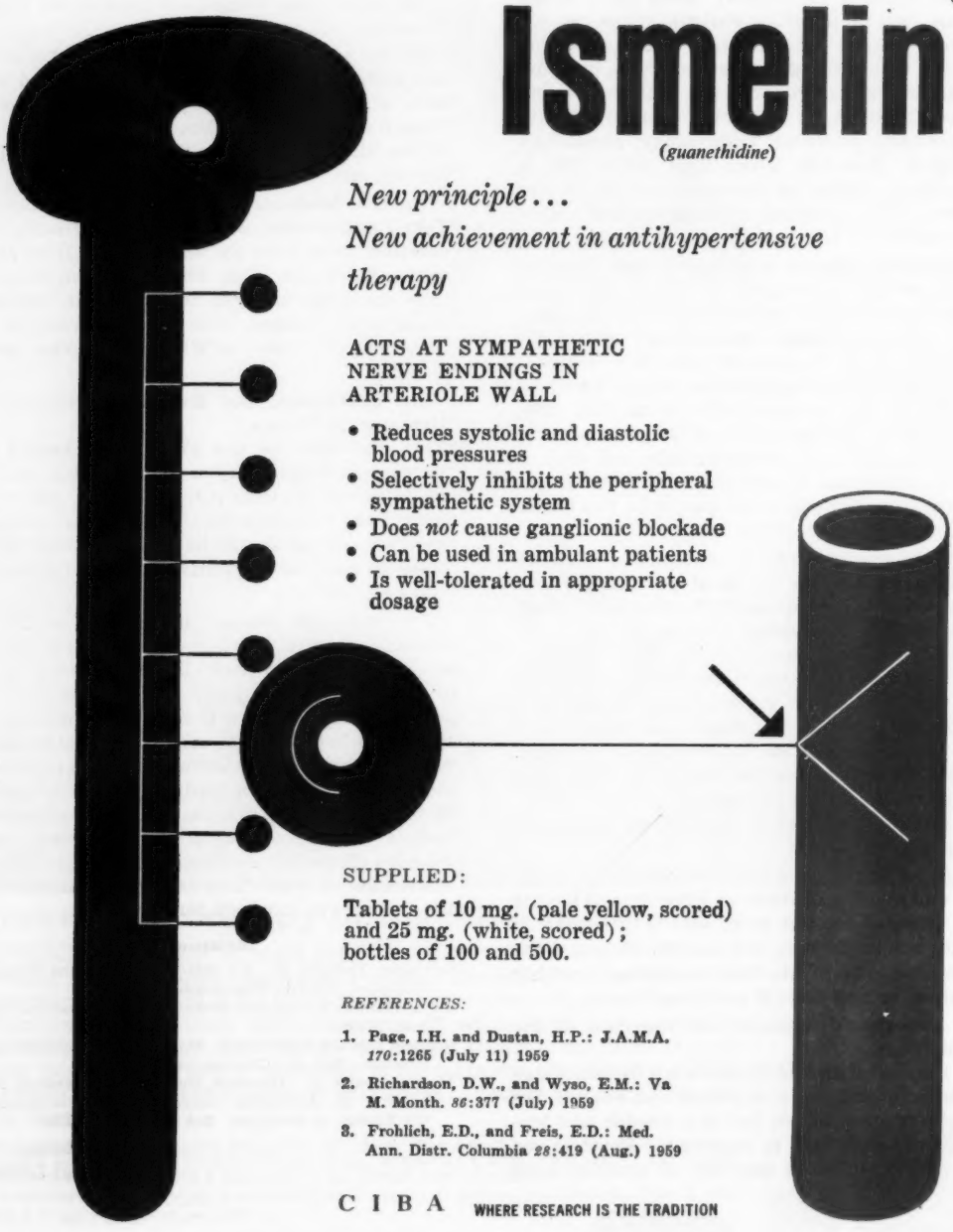

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C I B A WHERE RESEARCH IS THE TRADITION

1489

Editorial

S. Vaisrub, M.D., M.R.C.P. (Lond.), F.R.C.P. (C.), F.A.C.P., Editor

Changing Landscapes

"The x-ray of the pelvis" — droned the earnest young man in white presenting his case at ward rounds — "revealed pagetoid changes." No one batted an eyelash. Unperturbed by the sound of Sir James Paget turning in his grave the captive audience listened on in respectful somnolence. Why get excited? Did it not hear but a few days ago a patient referred to as "Cushingoid?" What was good for Harvey Cushing ought to be good enough for Paget, and if Von Recklinhausen is next, no one will be surprised. Que sera, sera. . .

The train of thought set in motion by this unorthodox yet not wholly illogical use of the suffix "oid" began to roll slowly along its narrow track through the picturesque countryside of Lingua Medica with its rich panorama of words, phrases, aphorisms, prefixes and suffixes. The moving scenery was familiar—this train had travelled the route before — but many changes were in evidence. Many old sights have disappeared to be replaced by a multitude of new ones. Gone were many old standbys — the diathesis, the facies, the morbus, the plethora. New favorites — the stress, the uptake, the turnover, the feedback, the gradient were assailing the eye. Particularly conspicuous was the adjective "dynamic." Hardly ever encountered on previous journeys, it now dominated the scene. Dynamic equilibrium, dynamic exchange, dynamic approach, dynamic therapy, dynamic steady state and a host of others possessed of "dynamism" crowded the landscape.

The familiar as well as the strange met the eye as the train passed by the field of prefixes. The hyper and the hypo, the supra and the infra, the inter and the intra, the pro and the anti, the macro and the micro, the dys and the normo still preceded gracefully the terms they transmogrified, but many displayed delicate changes in meaning, as they attached themselves to words they have never met before. The "pre" so obviously plain and unprepossessive in pre-pyloric, pre-natal, pre-marital, pre-operative, appeared mysteriously glamorous in the newer nebulously vague pre-diabetes, pre- atherosclerosis, pre-cancer, pre-psychosis. The "pseudo" of the old mirth provoking pseudo-cyesis looked so much more respectable in the more recent pseudo-hypoparathyroidism. (Some of its comic qualities, however, were still apparent in the very newest grotesque pseudo-pseudo, hypo-parathyroidism and pseudo-flatulence). The "eu," rarely encountered since the robust eucracy of good health, the eutrophy of good nutrition, the eupathy of good affection and the euthymy of the cheerful mind have vanished at the turn of the century, could be seen again in fair numbers brightening the view with serene euthyroid, blissful eupepsia, contented euglycemia and uproarious euphoria. The new and the old mixed harmoniously in the realm of the prefixes.

A similar happy blend of the old and the new greeted the eye as the colorful suffixes came into view. The old itides and the oses were there in impressive numbers, as were the megalies and the ologies. A relative newcomer—"opathy"—however, was stealing the show. Neuropathy, cardiopathy, nephropathy, arteriopathy, uropathy, nonchalant and noncommittal—were prominent in their casual elegance. The suffix "oid" was also conspicuous. Most interesting, if only by virtue of its responsibility for this pleasurable journey, it offered a considerable variety of linkages. At first glance it all seemed old and familiar — rheumatoid, lymphoid, adenoid and mongoloid have been there for over a century. Yet, a certain newness, a subtle change, could be detected. Rheumatoid, erysepeloid, sarcoid, were distinct personalities no less vague than the entities they meant to resemble. The oids of more recent vintage, however, seemed to lack this distinction. They appeared to convey no positive meaning beyond that of vague resemblance. Attached loosely to a variety of disorders, they carried overtones of perplexing uncertainty. Epileptoid, anginoid, leukemoid, Cushingoid looked like refugees from precision, escapees from certainty, exceptions to accepted rules.

Happily some of these exceptions found new rules to conform to. The erstwhile nondescript hemophilioids—illegitimate non-conforming members of the hemophilia family—found status of precision and prestige of identity in the light of recent knowledge about the mechanism of coagulation. A similar happy fate befell the carcinoids in the wake of researches on serotonin. It is to be hoped that a similar happy end is in store for all the other restless exceptions in search of a rule.

The whistle blew and the rambling train came to a sudden stop. This also signalled the end of this philosophicioid editorial.

Ed.

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Letter to The Editor

April 14, 1960.

The Editor,
Manitoba Medical Review,
City

Dear Editor:

Is our socialized hospitalization scheme defeating its own purpose? Is it giving the public that, for which it pays? To a great degree "no".

Our hospitals provide top notch diagnostic aids to the physician, which occupy no small floor space. Said facilities are available five days a week and on the seventh day "he resteth," while the patient, the forgotten individual remains at home because no beds are available.

Here at home the poor patient depends on the clinical skill of the family doctor, who is denied the advantages of diagnostic services and we are back to "horse and buggy" medical skills—and the Doctor, if he had the time to make a second or third house call cannot afford so to do for less than taxi fare.

Surely there is some solution. Our problem is not getting the patient out of hospital but getting him in. Must we face the fact that we will have to treat more and more patients at home?

Yours truly

J. F. Edward, M.D.

Book Review

A Handbook for Dissectors: J. C. Boileau Grant. Fifth Edition. Williams and Wilkins Company, Baltimore, Maryland 2, U.S.A. pp. 441. Price $5.00.

The fifth edition of "A Handbook for Dissectors" by Dr. J. C. B. Grant is an excellent guide for students to the orderly dissection of the human body. The text has been revised in many places, but the outstanding change has been the marked increase in the number of illustrations throughout the book. These illustrations are semi-diagrammatic and serve to focus attention on some of the more difficult regions.

The nomenclature used in this edition is the Nomina Anatomica Parisiensia (N.A.P.) in place of the Birmingham Revision (B.R.) of the Basel Nomina Anatomica (B.N.A.). Since some of the old familiar terms are in many cases displaced by the newer terms, the author has bridged the gap by placing the old synonyms in brackets after the new term.

Since Dr. Grant is world famous as a teacher and author of books, atlases and papers on anatomy, it is not surprising that he has been able to concentrate his fund of knowledge about the dissection of the human body into a comprehensive handbook for dissectors. This little volume could also be profitably used by doctors doing post-graduate work.

L. A. S.

Abstracts from the Literature

The Problem of Osteoarthritis: R. M. Stecher, Arch. Interamerican Rheum. 11: 4, Dec. 1959, p. 695-704.

Osteoarthritis is a clinical entity, the diagnosis of which implies the presence of symptoms and physical signs referable to a degenerating joint. It is a disease usually affecting one joint, such as a knee or a hip; one pair of joints, such as the knees or the hips; or one set of joints, such as those of the fingers or the spine.

Osteoarthritis of the fingers, of the hips, and Heberden's nodes, all differ in their sex incidence, age of onset and relation to menopause. Thus, it should never be regarded as a general disease, but rather a local one, and certainly not a simple senile degenerative process that has been postulated by Kellgrew and Moore in 1952.

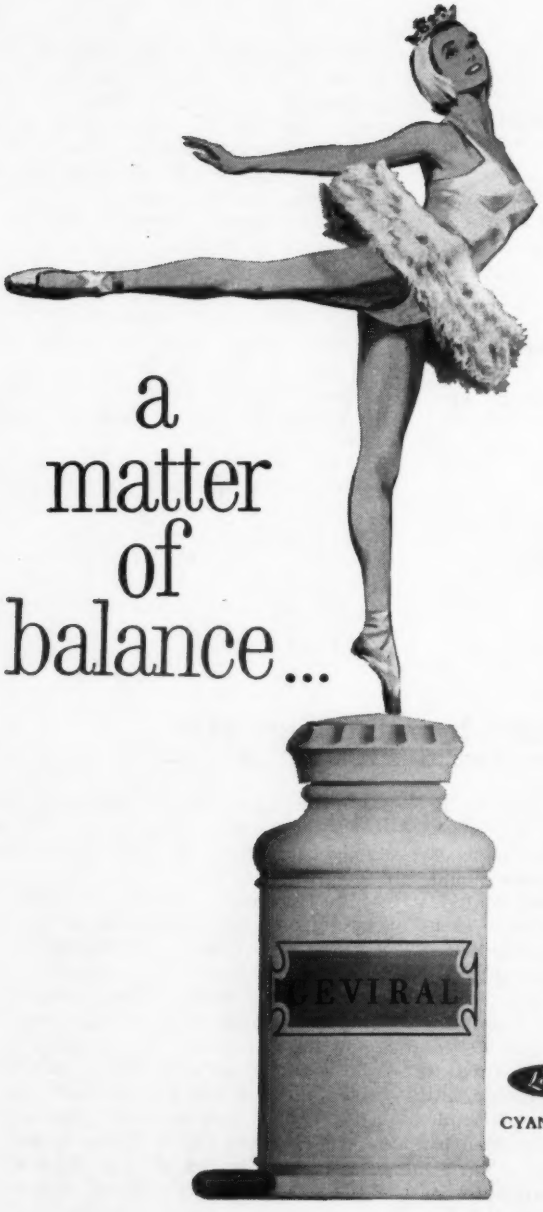
Osteoarthritis confined to one hip originates in 50% in those with some previous congenital deformity. It can manifest itself as early as 33 years of age, but the median age is 49.1 years.

Heberden nodes are ten times more frequent in women. They appear to be inherited in many as a sex influenced autosomal dominant. Their presence need not mean symptoms or future deformity; may mean future involvement of proximal joints; may cause marked stiffness and disability of the fingers.

Involvement of the spine can be on the basis of subligamentous ossification arising from the edge of vertebral bodies and this should be regarded as osteophytosis. In this condition the intervertebral bodies show degeneration. Ankylosing spondylitis is osteoarthritis with normal intervertebral discs and the osteophytes extend to the body and may be confluent. The former condition is thought to be a reaction due to stress and strain beyond the physiological endurance of the tissues.

Osteoarthritis of any pattern has certain features in common, but the clinical course differs markedly. It has been shown that the affected joints have a greater than normal blood supply. They cannot all be regarded as degenerative senile changes but rather due in part to reaction to unusual stresses and strains, also heredity and others are as yet to be determined.

F. J. Lone



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Jaundice Associated with Norethandrolone (Nilevar) Therapy. R. K. Shaw, G. L. Gold, Ann. Int. Med., Vol. 2. Feb. 1960, p. 428-433.

A case report of a 60 year old female with multiple myeloma; suggests a hepatic disorder due to Nilevar.

The initial symptom was pruritis followed shortly by laboratory evidence of obstructive jaundice. Liver biopsy was consistent with intrahepatic cholestasis. It has been shown in the past that testosterone can and does cause liver damage. Chemically Nilevar closely resembles testosterone.

The above changes are reversible on withdrawing the drug.

Dunning, (J.A.M.A. 167: 1242, 1958) reports two cases similar to this with obstructive jaundice which was reversible.

Schaffner and Popper (Am. J. Med. 26: 249, 1959) had four patients out of 27 who developed cholestasis after 3 - 5 weeks' treatment with norethandrolone (Nilevar).

F. J. Lone.

☆

Echinococcosis in North America: E. L. Schiller. Ann. Int. Med. 52: 2, Feb. 1960, p. 464-476.

There are two species of echinococcus. One is E. granulosus, first identified in 1786 and the other E. multilocularis in 1863. Though their life cycles are similar, their clinical aspects are different.

The definitive or final host harbors the adult tapeworm. The intermediate host supports larval development.

Canine animals as well as the cat are the definitive hosts in both. Herbivores are usually the intermediate hosts in E. granulosus and rodents in E. multilocularis. Man is accidentally the intermediate host in both.

E. Granulosus

Commonest form is man, presenting as a unilocular cyst. The ingested eggs hatch in the duodenum. The larvae penetrate the mucosa to enter the mesenteric venules and are carried into the circulation. They are filtered out in various tissues and organs in the capillary bed. The common sites, are liver, lungs, kidney, pelvis, heart, bone, central nervous system. Once the larva becomes imbedded, a fluid filled cavity develops within it. The walls differentiate into two layers and compression of surrounding tissue causes a host fibrous capsule. Inside there is proliferation of the inner layer into cell masses which in turn form broad capsules with numerous scolices inside. Each is capable of infecting the definitive host.

These unilocular cysts grow slowly and present as a local diagnostic and therapeutic problem.

E. Granulosus

This species, instead of a unilocular cyst, produces a cyst which buds to form a steadily proliferating organism. In essence it presents a malignant growth which usually takes a fatal course. It usually presents in the liver or lung.

Cases are continually cropping up in the Eskimo and others residing in Northern Canada, Alaska, St. Lawrence region. Early radical surgery is the only hope for cure at present.

Diagnosis

Serology tests are variable. Intradermal Casoni test, using non-specific antigen, gives result accuracy from 53.8 - 100%. Complement fixation tests are sensitive to 52.4%. X-ray examinations are occasionally helpful.

F. J. Lone.

☆

An Evaluation of Serum Transaminase in the Jaundiced States: H. J. Sacks, G. F. Lanchantin. Amer. J. Clin. Path. Vol. 33, No. 2, Feb. 1960, p. 97-107.

120 jaundiced patients were studied to determine the diagnostic value of SGOT, SGPT and bilirubin.

It was found that values of SGOT over 500 units (Karmen) reflected a viral hepatitis and excluded presumptive surgical obstructive jaundice. In cases that suggest myocardial infarction, values over 500 units usually meant that there was additional hepato-cellular damage. SGPT in these cases paralleled the CGOT levels and was of no additional value.

Values less than 500 units of SGOT were non-specific for the type of jaundice. It was found that comparing the ratio of SGOT: bilirubin helped to separate the obstructive cases. If the ratio was greater than 40 it presumably excluded duct obstruction. Ratios less than 40 excluded cases of hepatitis.

The SGPT was of some value when the SGOT was below 500 units. If the SGOT: SGPT ratio exceeds 3:18, then hepatitis was usually excluded. However, this ratio was of no value in distinguishing duct obstruction from cirrhosis.

F. J. Lone, M.D.

☆

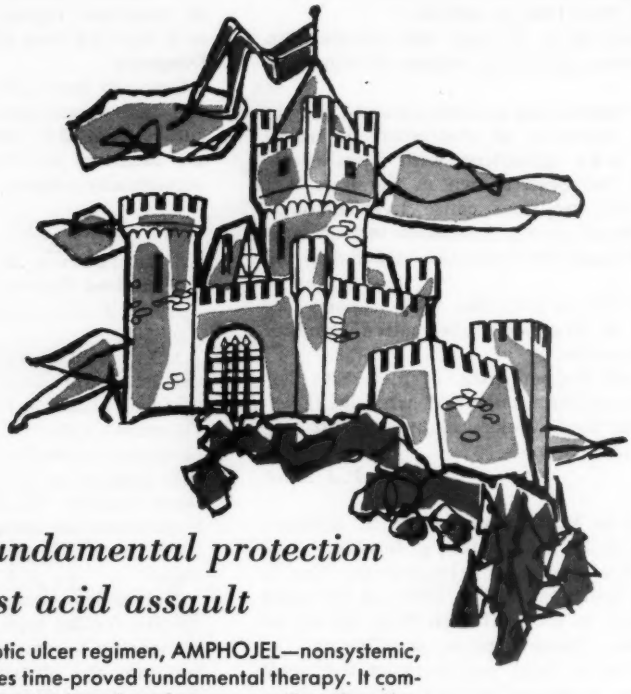
Peliosis Hepatis and Cholestasis Following Administration of Norethandrolone (Nilevar): B. S. Gordon, J. Wolf, T. Krause, F. S. Lai. Am. J. Clin. Path. Vol. 33, No. 2, Feb. 1960, p. 156-165.

Two patients died of liver failure after the administration of Norethandrolone (Nilevar).

One patient had pemphigus and had been on long term steroid therapy. Because of her large doses of prednisolone, a supplemental anabolic therapy was given. The second patient had chronic pancreatitis and was treated with both steroid and norethandrolone. Both patients died, and the liver showed marked distortion by large "lakes" of blood. This condition is termed peliosis hepatis. In addition, both showed cholestasis.

It has been noted that of the patients receiving a dose greater than 25 mg. daily, about 75% showed biochemical liver abnormalities. These two patients had received large doses and liver failure was irreversible.

F. J. Lone, M.D



fundamental protection against acid assault

Whatever the peptic ulcer regimen, AMPHOJEL—nonsystemic, nontoxic—provides time-proved fundamental therapy. It combines two aluminum hydroxide gels—one reactive, the other demulcent—for two specific purposes. The reactive gel promptly buffers gastric acidity. The demulcent gel promotes healing of denuded mucosa by forming a viscous, protective coagulum.

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A safe antacid and demulcent for the treatment of active peptic ulcer; also valuable for the prevention of recurrent attacks. Amphojel counteracts the dangerous gastric hyperacidity arising from fatigue, infection, emotional stress or dietary excess.

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All the advantages of Amphojel plus the anticholinergic action of scopolamine methyl bromide and the sedative effect of butabarbital provide almost instant relief of pain in acute peptic ulcer.

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Provides a constipation-inhibiting antacid equally effective in occasional hyperacidity and hyperacidity associated with peptic ulcer.

Supplied: Liquid—Bottles of 12 fl. oz. and 1 Imp. gal. Tablets — Bottles of 50 and 500.

Questions and Answers Page

In order to keep the medical profession informed as fully as possible in all matters relating to Association business, medical economics and prepaid medical care, this page welcomes questions pertaining to these fields.

Sir:

In Britain, an un-united medical profession was ill prepared to meet the challenge: the result, an unhappy medical profession "working for the Government." In the United States, a powerfully organized professional public relations staff employed by the medical profession has recently successfully met the challenge of the Forand Bill and defeated the first heavy attack on the medical profession by the forces of Socialism. Saskatchewan, following the British tradition, gives us the disturbingly near view of a medical profession hastily organizing to fight an already serious, possibly deadly blow to their independence.

Sir, are we, the medical profession of Manitoba, to follow in the footsteps of Britain, or of the United States: will we await our turn as meekly as our colleagues to the West, or will we fight for our own independence and attempt to keep our patients safe from the dead hand of bureaucracy? Has the example of Government hospitalization not been a warning? Are the doctors of Manitoba satisfied that the mounting expenses, and the increasing difficulties in management are good for our patients?

This letter is being written for two principal reasons — firstly, to suggest that a poll be taken of the physicians of Manitoba with a view to determining what steps, if any, should be taken in order to prepare for the impending crisis. It is my opinion that we have a nearly uniformly hostile press; it seems to be fashionable to imply that doctors are responsible for all the financial problems of the sick — have we any method of clarifying to the public the difference between "doctor's bill" and "cost of illness"? Have we any way of fighting the erroneous notion that "doctors are too rich"? There must be legitimate ways to reach the public in these matters. Out of these questions, and others, arises my second purpose—to enquire whether a part time press relations officer as the M.M.A. has recently appointed, is enough under these critical circumstances; or whether an entire staff should be employed for the purpose of a crash program to improve relations between the press, the physicians and the general public.

Michael Bruser, M.D.

☆

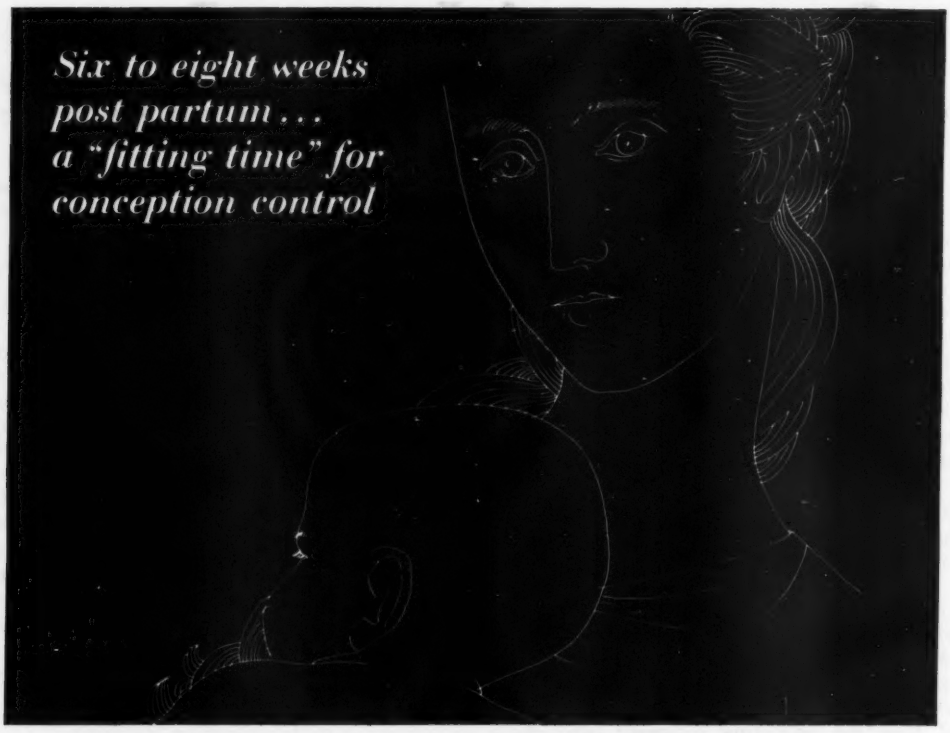
The letter from Dr. Michael Bruser, printed above, is difficult to answer because of the multiplicity of questions contained therein, and the rhetorical nature of some of them. I may say however, that I have yet to hear of a member of the C.M.A. Public Relations Committee speak in favor of a campaign à la Whittaker and Baxter which I assume to be referred to in paragraph I.

There is no doubt in my mind that the situation in Saskatchewan is a very real threat to the independence of the medical profession there, and no doubt that a victory for the "forces of Socialism" there will be a grave portent for the future of the whole profession in Canada. However, if the efforts of the profession in Saskatchewan have been belated, the report to the C.M.A. Public Relations Committee by Dr. Forrester does not suggest they are standing meekly by (M.M.R. vol. 40, p. 393, May, 1960).

I take exception to the idea that we have a "nearly uniformly hostile press." We have had much good publicity in the past few months and with the help of the skillful press relations officer which we have, we expect to do even better. Even without the help of Mr. Telpner, I would not have thought this true.

Finally, the question of a full time public relations officer, or "an entire staff," depends partly on our finances and partly on our assessment of what we need to do and what we can hope to do. This is the present concern of the Public Relations Committee and you may expect a report to be put up for debate at the Annual Meeting.

R. H. McFarlane, M.D.,
Chairman,
Public Relations Committee



Conception control becomes a matter of special concern six to eight weeks post partum, when the new mother looks to you for advice on the best way to plan the balance of her family. Reliable conception control can be virtually assured with the diaphragm and jelly method, at least 98 per cent effective.[1]

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You can now prescribe a complete unit for either type of diaphragm. RAMSES "TUK-A-WAY"* Kit #701 contains the regular RAMSES Diaphragm with introducer and a 3-ounce tube of RAMSES Jelly; RAMSES "TUK-A-WAY" Kit #703 contains the RAMSES BENDEX Diaphragm and Jelly tube. Each kit is supplied in an attractive plastic zippered case, beautifully finished inside and out. Both types are now available at key prescription pharmacies.

Reference: 1. Tietze, C.: Proceedings, Third International Conference Planned Parenthood, 1953.

*Ramses** *Diaphragms and Jelly*

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Social News

Reported by K. Borthwick-Leslie, M.D.

Hello, everyone: Apparently I am back, but Drs. Bennett and Huggins did such a good job on the column for me, I really think they should keep on. Most sincere "thank you" Marj and Donna. My enforced absence was rather grim in spots, but for the most part enjoyable.

Ever have live hornets and rose bushes incorporated in your surgical bandage? Could have sworn that's what they were.

☆

Speaking of Marjorie Bennett — doesn't she look pretty smart cleaning up her "Yacht" — and what a smart idea to cruise back and forth to work instead of bucking motor traffic.

☆

Congratulations to all the Graduating Class in Medicine and those receiving post graduate degrees and certification.

☆

Special congratulations to Dr. Joseph Doupe, recipient of the U. of M. Alumni Association Jubilee Award for "distinguished achievement." The award was presented by Dr. Alan Klass, president of the Alumni Association.

☆

Leslie J. Cera, M.D., M.Sc., F.R.C.P.(C), has been named a Fellow of the American College of Physicians.

☆

Welcome to Winnipeg and District . . .

Dr. and Mrs. Robert Lawler who in May arrived from Seattle. Dr. Lawler will be head of the psychiatry department of the Children's Hospital and a member of faculty of Manitoba Medical College, his Alma Mater of 1948.

Dr. and Mrs. L. H. Truelove, with three husky looking sons, have arrived from Edinburgh. Dr. Truelove is chief of staff of the new Rehabilitation Hospital and will be director of the school of physiotherapy and occupational therapy, to be established in the early fall.

Dr. and Mrs. R. H. Parker and family of three have arrived from York, England, where Dr. Parker has completed his post graduate work in psychiatric medicine. He has been appointed to the staff of Brandon Mental Hospital.

☆

The Manitoba Clinic announces that Martin L. Robinson, B.A., M.D., M.R.C.O.G., F.R.C.S.(C), is now practicing in the Department of Obstetrics and Gynaecology.

Brigadier E. H. Ainslie of Waskada, Man. and Ottawa, deputy surgeon general of the Canadian Army has been appointed an honorary physician to the Queen.

☆

Mrs. A. T. Cameron has returned from the western coast. In Pasadena she visited her son and daughter-in-law, Dr. and Mrs. A. G. W. Cameron, and in Vancouver her brother and his wife, Dr. and Mrs. F. C. Bell.

☆

Mrs. Maxwell Rady has been elected chairman of the board of governors of Maimonides College, Winnipeg. Dr. A. A. Klass is also a member of the board. Maimonides is the only college in Western Canada with advanced courses in the Hebrew language, literature, history and religion.

☆

To our athletic members — Dr. S. Greenberg received the Harold Daly Rose Bowl trophy, at the Y.M.C.A. wind-up luncheon last week — 60 miles he swam during the season. Other trophy winners right up there were Drs. Reid Taylor, Fred DuVal and Wally Grant.

☆

New proud parents are . . .

Dr. and Mrs. Anthony O'Keefe, a daughter, Helen, on May 11, 1960.

Dr. and Mrs. John McLean, a daughter, Pamela, on April 28, 1960.

Dr. and Mrs. Lavoie, also a daughter, Lise Virginie Marie, on May 7th.

Dr. and Mrs. E. S. Connor, Pickle Crow, Ont., May 7th, Gregory Stephen.

Dr. and Mrs. Wm. McLean of 14408 - 85th Ave., Edmonton, a daughter, Margot Lynn, May 8th.

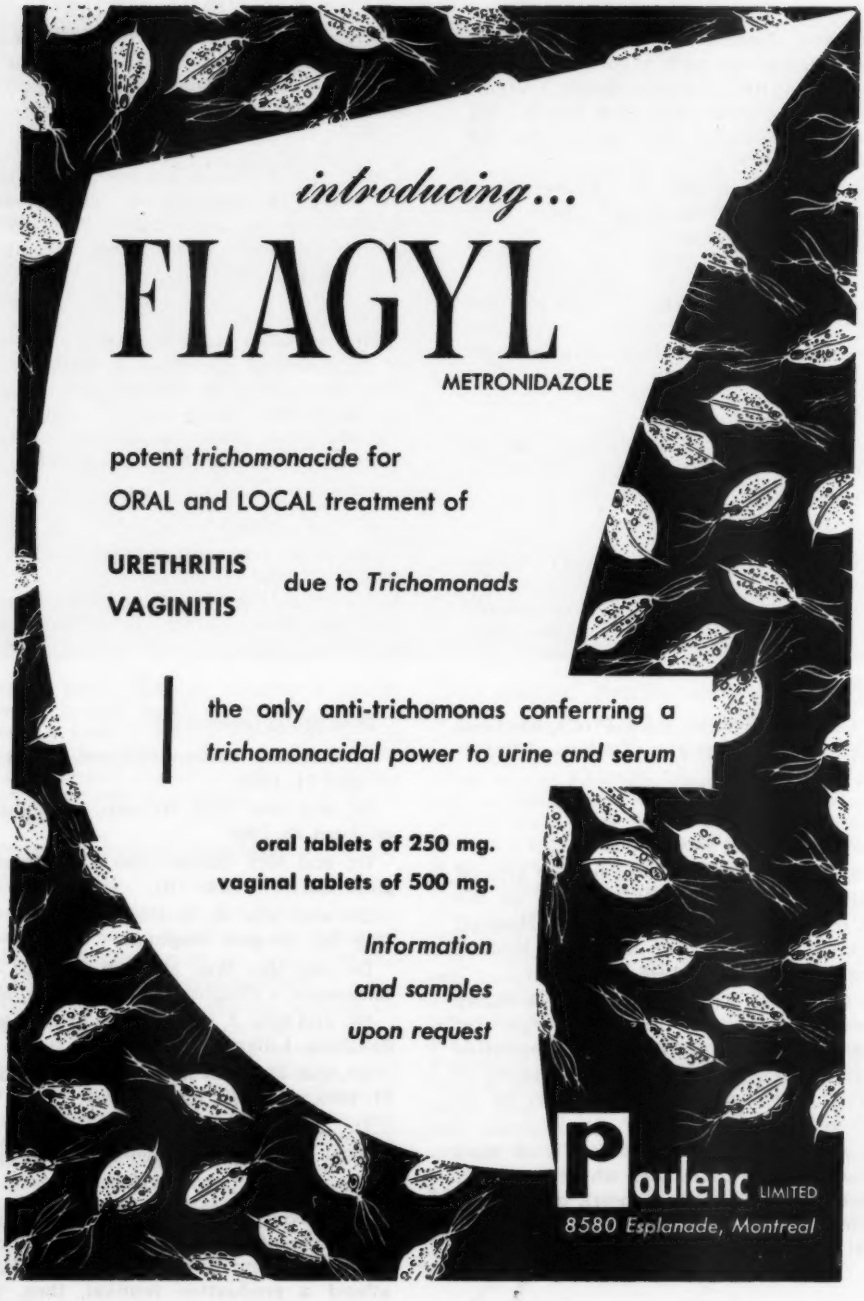
Dr. and Mrs. J. H. More, Gladstone, Man., a third daughter, Lilian May.

Dr. and Mrs. Ian Morrow, Duncan, B.C., on May 11, 1960, a brother for Geoffrey.

Dr. and Mrs. Harold Swanson, a second son, Harold Peter, on April 28th, St. Louis, Missouri.

☆

Tomorrow, at the crack of dawn, Mrs. Hillsman and I take off in that jet propelled Corvette of Dr. John's for New Haven, where Mrs. Hillsman will attend a graduation reunion, then to Montreal where she will visit their son, Dr. Dean Hillsman and his wife, Shirley, while I go into raptures over that new granddaughter, Jennifer. Back to the rat race about June 25th.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Association Page

Association Activities

Nominees to M.M.S Board

We are pleased to report that Dr. D. N. C. McIntyre was named Chairman, Committee of Nominees to M.M.S. Board and was welcomed as a member to the Executive Committee at the meeting of April 20th, 1960.

M.M.S. Building

Members undoubtedly received a brochure from M.M.S. concerning the proposed sale of their building on Osborne Street. A special committee of the Association was named to consider the possibility of purchasing the M.M.S. building. The committee together with the C.P. & S. Liaison Committee discussed the pros and cons of such an arrangement and came to the conclusion that the Executive Committee should not consider purchase of the present M.M.S. building because of the difficulties envisaged in administration and financing. The Executive Committee concurred. Incidentally, construction is now under way at the new M.M.S. site in the Polo Park area.

Report of Trusteeship Committee of the C.M.R.S.P., March 1960

1. The Unit value started at a low of $10.00 on November 1957. It went to a high of $12.63 on February 28, 1959 and dropped to $11.89 as of February 29, 1960. The drop in the last quarter is due to market conditions of the last quarter. However it is up beyond other similar funds by more than 2%.

2. Book value of the fund as of February 29, 1960 is $3,567,301.10.

3. Two million was put into the fund in 1959 and about two and a quarter million will likely come in this year (1960), i.e. about one million to the insurance fund and one and a quarter million to the common stock fund.

4. There has been a demand by some C.M.A. members to establish an additional fund which would permit them to invest more than the $2500.00 allowed as tax deductions. Of course they could not get tax deductions on this but they feel fund prospects are better than they would get elsewhere. This matter has been worked out and will be submitted to the C.M.A. for approval. If approved an announcement will be made in the Journal and to present participants.

United Health Insurance Corporation

The Association has been requested to name two representatives to the U.H.I.C. Advisory Contracts Committee. Dr. L. R. Rabson and Dr. R. L. Willows have accepted the appointments.

Medical Consultation Board to the Motor Vehicle Branch

Authority has been obtained from the Executive to establish a Consultation Board to the Motor Vehicle Branch. The composition of the Board to be as follows:

1. A medical chairman. This is to be a physician appointed by the Manitoba Medical Association. It is suggested that his term of office be at least a year in order to preserve continuity in this service.

2. Two consulting physicians. These members should be selected on a rotating basis preferably to terms of at least one year. This is to provide stability and to insure experience. It was further suggested that the consulting physicians should be a neurologist and internist.

3. Invited members. It is recommended that the board should have the power to request attendance of such persons as it seems advisable for the judgment of the particular case or cases. Such invited members may be physicians but might include lay persons such as a representative from the Attorney-General's office.

The Motor Vehicle Branch has been informed of this action. Names of the Board members will be made known in the very near future. This has been a project of the Committee on Medical Aspects of Traffic Accidents.

Manitoba Rehabilitation Hospital

A warm welcome is extended to Dr. Leslie H. Truelove who recently arrived in Winnipeg to take up his duties as chief of staff of the hospital. Dr. Truelove is also director of the University's school of Physio-Therapy and Occupational Therapy. It is anticipated that the first class of the school will commence in September of this year.

The permanent location of the school will be in the Manitoba Rehabilitation Hospital now under construction at Bannatyne Avenue and Sherbrook Street.

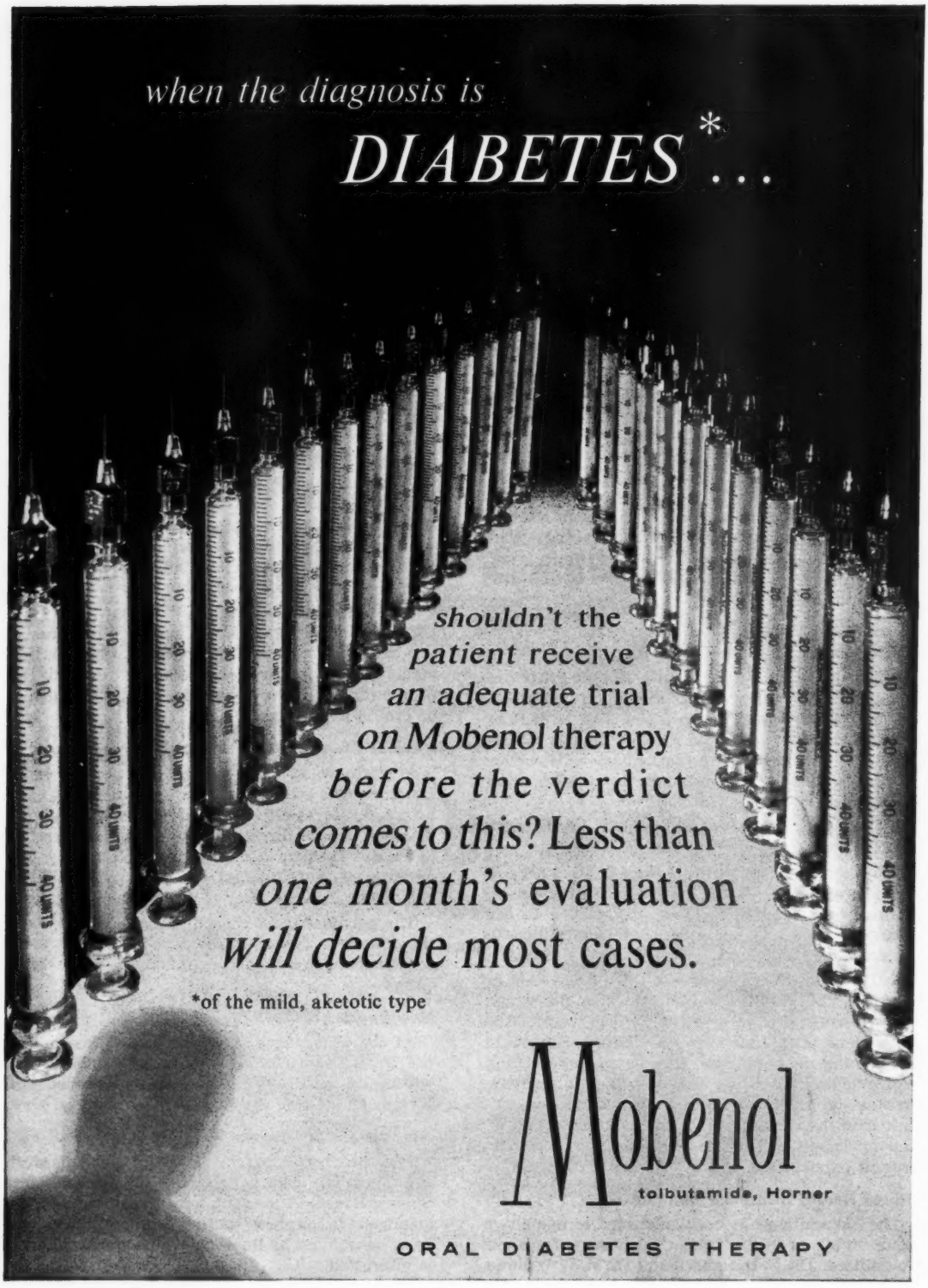
New Fee Schedule

At the last Executive Meeting the Chairman of the Professional Policy Committee reported that editing of the draft is now being proceeded with for presentation to the Executive Meeting in May.

Hospital Survey Board

Preliminary discussions are under way concerning a possible brief for submission to the Hospital Survey Board. A meeting with the Board has been arranged to explore various subjects that have been considered as items in which the Association is interested.

R. P. H. Sprague.


when the diagnosis is
DIABETES*...
shouldn't the patient receive an adequate trial on Mobenol therapy before the verdict comes to this? Less than one month's evaluation will decide most cases.
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ORAL DIABETES THERAPY

Social Allowances Medicare

For Manitobans and perhaps others this program is one of the most significant advents of recent years. A short history of its development and the coverage provided should be of interest to all members of the profession.

In November 1959 the Minister of Health invited members of the Association to meet with him to explore the steps and principles involved in creating a type of organized medical service for indigent persons in Manitoba. The first such meeting took place on the 24th November 1959 and many meetings followed involving the Minister, his colleagues, representatives of the Faculty of Medicine, University of Manitoba, and the M.M.S.

Very early in the discussions it became apparent that it was necessary that teaching methods for medical students not be disturbed or changed. In Manitoba it has been the practice that the indigent groups have come to the teaching hospitals and received in and out patient care. The medical teachers felt this must continue. The problem then was to form a plan satisfactory to Government, the Profession and the Medical School.

A logical solution to the problem was explored—a special medical contract with the Government, covering the indigents, underwritten by M.M.S. This was developed on the basis that the M.M.S. would cover house and office calls only. Office calls would include only history, physical examination, opinion, advice and prescription. House calls to have comparable definition. M.M.S. to be the fiscal agent, the initial rate $1.20 per capita per month. Prorating and experience rating would apply. To be handled by M.M.S. as far as possible as a regular group.

What about in-hospital coverage? The Association was of the opinion that present teaching arrangements remain undisturbed and in view of the fact that for years the profession has been providing free care to indigents in hospital it was agreed that this practice continue.

In short the offer to the Government was that M.M.S. cover house and office calls; the profession continue to look after indigents in hospital. This was accepted in principle by the Government on the understanding that the contract should include a provision to prohibit billing of the patient. It was agreed by the Executive Committee that these patients should never be billed personally but on the other hand the Executive pointed out to the Minister that there is no reason, where other arrangements now exist for payment of care of these patients that such arrangements cannot be continued.

There are technical details to be worked out and perhaps unforeseen problems will arise that will have to be resolved. May, 1960, is the expected effective date. Each member of the Association is asked for his fullest co-operation to ensure the successful operation of the program.

North of 53 District Medical Society

A meeting of the North of 53 District Medical Society was held at Clearwater Lake Hospital, The Pas, April 6th and 7th, 1960.

Those attending included: Drs. S. L. Carey, D. L. Gemmell, A. L. Jacobs, J. Leicester, P. G. Lommerse, J. P. Lopez, M. W. Black of The Pas; Dr. J. M. McMahon of Lynn Lake; Drs. H. L. McNicol, H. K. Stinson, G. H. Willson of Flin Flon; Drs. J. D. Adamson, J. R. Taylor, J. M. Bowman, M. J. Lehmann and Mr. R. P. H. Sprague of Winnipeg.

The visitors from Winnipeg were met at the airport by Dr. Carey who was acting as host for the meeting. Prior to lunch Dr. Carey presented interesting x-ray studies of patients and following lunch a tour of the hospital was arranged.

At 2 p.m. the meeting convened and Dr. Carey welcomed all delegates to the Clearwater Lake Hospital.

The Society's President, Dr. McMahon, then took the chair and introduced the guest speakers. The first speaker was Dr. M. J. Lehmann whose subject was "Injuries of the Chest." The second speaker was Dr. J. R. Taylor whose subject was "Injuries of the Lower Abdomen." The third speaker was Dr. J. M. Bowman whose subject was "Emergencies in the Newborn."

Following the scientific program there was a brief discussion on business matters relative to the Society's activities.

A most enjoyable reception and dinner was provided at the hospital by Dr. and Mrs. Carey following which the members and their wives spent a very pleasant evening at their home.

The business and scientific session was resumed on Thursday morning with hospital rounds at St. Anthony's Hospital followed by a business meeting in the Boardroom of the hospital with election of the following officers for the year 1960-61:

President: Dr. G. N. Willson, Flin Flon
Secretary-Treasurer: Dr. A. H. Smithen, Flin Flon
Representative to the M.M.A.
Executive Committee: Dr. J. Leicester, The Pas.

Following the meeting a luncheon was arranged at St. Anthony's Hospital through the courtesy of Rev. Sister Bedard and other staff members.

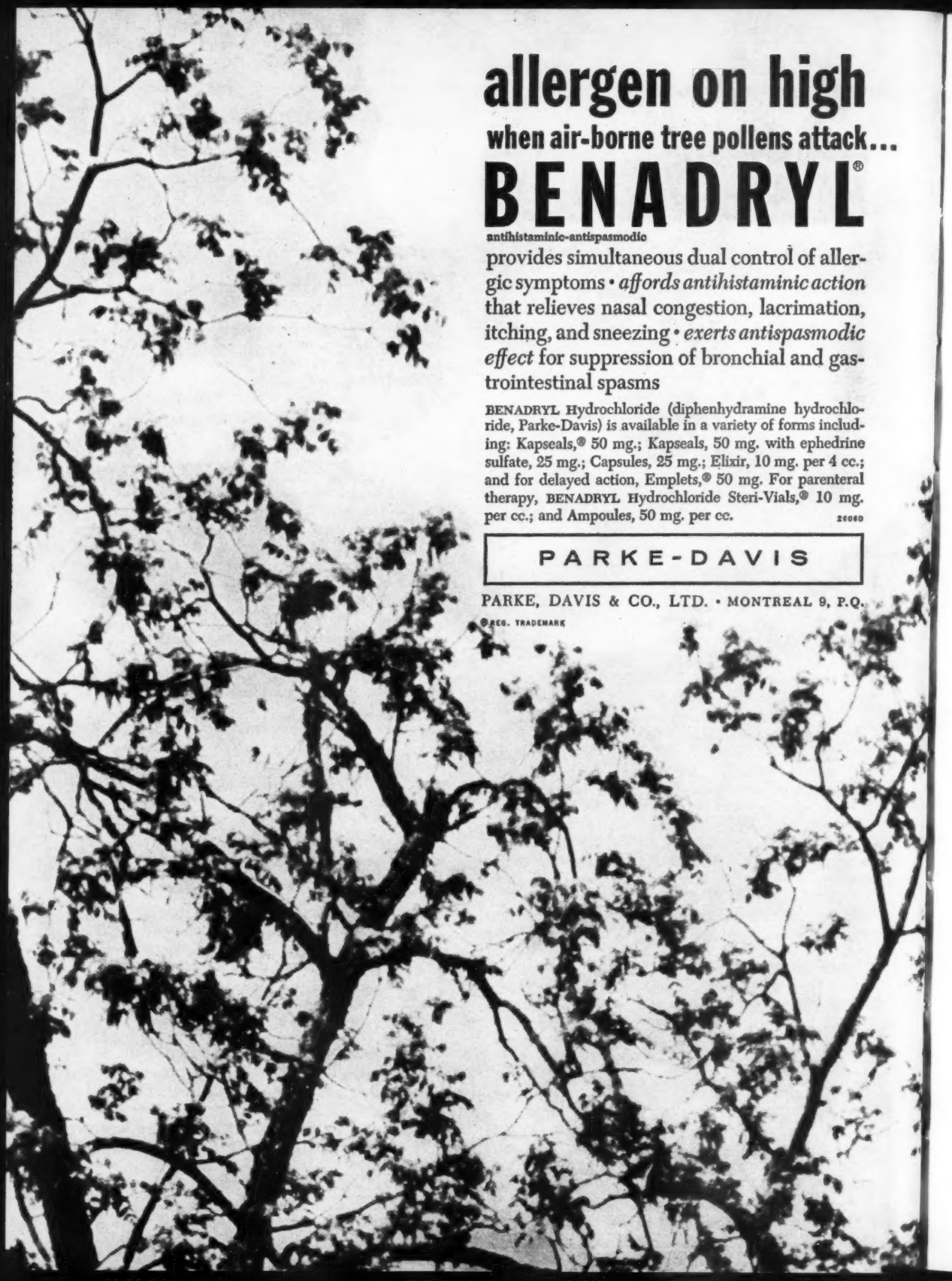
The Winnipeg party left on the afternoon plane.

☆

Brandon and District Medical Society

A meeting of the Brandon and District Medical Society was held in the Assiniboine Hospital on Thursday, April 21st, 1960.

Present were: Dr. D. G. Coghlin, President; Dr. R. H. D. Sykes, Secretary; Drs. R. P. Cromarty, A. J. Elliott, H. S. Evans, J. A. Findlay, W. P. Hirsch, J. M. Matheson, R. F. M. Myers, A. H. Povah, F. J. E. Purdie, V. J. H. Sharpe from Brandon; Dr. J. B. Bonar from Deloraine; Drs. Nancy Sirett and M. A.



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Sirett from Erickson; Dr. Ethel M. McPhail from Boissevain; Drs. R. F. Friesen, K. O. Wylie, and Mr. R. P. H. Sprague from Winnipeg.

The meeting convened at 2.30 p.m. under the Chairmanship of the President.

The Scientific program consisted of the following papers:

Speaker: Dr. K. O. Wylie
Subject: "Malignant Disease in Infancy and Childhood"
Speaker: Dr. R. F. Friesen
Subject: "The Problems of Pregnancy in Diabetics"

Each paper was followed by considerable discussion.

The business session included a resume of the minutes of the previous meeting of December 2nd, 1959. The President reported on various subjects as business arising out of the minutes. It was decided that a meeting would be held early in June (prior to the CMA meeting) at Clear Lake.

A reception and dinner were held at the Prince Edward Hotel attended by members and wives. Dr. Coghlin presided and after introducing head table guests called on Mr. R. P. H. Sprague, Assistant Executive Director, M.M.A., to say a few words. He brought greetings from Dr. F. G. Allison, President, M.M.A., and Dr. M. T. Macfarland, Executive Director, both of whom were unable to attend and briefly outlined some of the current activities of the Association on a local and national level. Following dinner members were entertained at the home of Dr. and Mrs. D. G. Coghlin.

☆

Obituaries

Dr. Arthur Leonard Jacobs

Dr. Arthur Leonard Jacobs, 56, of The Pas, Manitoba, died on May 13th. After graduating in medicine in 1928 from the University of Manitoba, he practised briefly at Fort William, then at Churchill and The Pas. At the time of his death he was a member of the Executive Committee of the Manitoba Medical Association, representing the North of 53 District. He is survived by his wife and a daughter.

Dr. Esther Gorsey Hollenberg

Dr. Esther Gorsey Hollenberg, 45, died May 7th after a long illness. Born and educated in Winnipeg, she graduated in medicine in 1938, served as interne in St. Boniface and Grace Hospitals, then practised in Winnipeg with her husband, Dr. Jacob Hollenberg. She was a member of Shaarey Zedek Synagogue and served on the board of education, National Council of Jewish Women and Hadassah. Her husband, two sons and a daughter survive her.

LEUKORRHEA

VAGINAL INFECTIONS

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Sodium Propionate	500 mg.	250 mg.
Sulfadiazine U.S.P.	400 mg.	400 mg.
Phenoxyethanol B.P.C.	0.04 ml.	
Dextrose and Lactose	q.s.	q.s.

OVOQUINOL-OESTRO

Same formula as OVOQUINOL-PLAIN plus 0.01 mg. Ethinyl-oestradiol B.P. per cone or tablet.

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One or two cones or tablets per day preferably at bed-time or as prescribed by the physician.

NADEAU LABORATORY LTD.

Montreal Canada

ANNUAL MEETING
INTERNATIONAL COLLEGE OF SURGEONS
CANADIAN AND UNITED STATES SECTIONS
Marlborough Hotel, Winnipeg
September 28th and 29th, 1960
PROGRAMME

Wednesday, September 28th, 1960

Morning

8.00 **Films.**
Presiding: Dr. W. Hall, Winnipeg, Man.

9.00 **Welcome.**
Presiding: Dr. S. S. Peikoff, Winnipeg, Man., Canada.
Secretary: Dr. E. N. C. McAmmond, Vancouver, B.C., Canada.

9.30 **Scientific Session.**
Presiding: Dr. C. W. Burns, Winnipeg, Man., Canada.
Secretary: Dr. L. R. Rabson, Winnipeg, Man., Canada.

9.30 **"The Prevention of Common Duct Strictures,"**
Dr. L. H. Appleby, Vancouver, B.C., Canada.

9.50 **"Practical Aspects of Diseases of the Oesophagus,"**
Dr. P. Thorek, Chicago, Illinois, U.S.A.

10.10 **"Vesico Vaginal Fistulas,"**
Dr. G. J. Strean, Montreal, Quebec, Canada.

10.30 **Exhibits.**

11.00 **a.m.**
Presiding: Dr. A. C. Abbott, Winnipeg, Man., Canada.
Secretary: Dr. C. E. Corrigan, Winnipeg, Man., Canada.

11.00 **"Diverticulitis,"**
Dr. H. E. Bacon, Philadelphia, Pennsylvania, U.S.A.

11.20 **"Jaundice — Its Surgical Significance and Treatment,"**
Dr. J. B. O'Donoghue, Chicago, Illinois, U.S.A.

11.40 **Visiting Surgeon.**

Noon

12.00 **Luncheon:**
Justice Samuel Freedman, Winnipeg, Man., Canada, Chancellor of the University of Manitoba.
Dr. Lennox E. Bell, Winnipeg, Man., Canada, Dean of the Manitoba Medical College.

Afternoon

Presiding: Dr. E. W. Pickard, Winnipeg, Man., Canada.
Secretary:

2.00 **Topic**
Dr. N. Owens, New Orleans, Louisiana, U.S.A.

2.20 **Visiting Surgeon.**

2.40 **Visiting Surgeon.**

3.00 **Exhibits.**

3.20 **Visiting Surgeon.**

3.40 **Visiting Surgeon.**

Evening

6.00 **Cocktails.**

7.00 **Banquet and Convocation.**

Thursday, September 29th, 1960

Morning

8.00 **Films.**
Presiding: Dr. W. Hall, Winnipeg, Man.

9.00 **Scientific Session.**
Presiding: Dr. M. R. MacCharles, Winnipeg, Man., Canada.
Secretary: Dr. M. M. Pierce, Winnipeg, Man., Canada.

9.00 **"Cancer of the Larynx,"**
Dr. A. A. Grossman, Montreal, Quebec, Canada.

9.20 **"The Diagnosis and Treatment of Tumors and Cysts of the Neck,"**
Dr. A. S. Jackson, Madison, Wisconsin, U.S.A.

9.40 **"Post-Operative Complications Following Gastrectomy,"**
Dr. J. M. de los Reyes, Los Angeles, Calif., U.S.A.

10.00 **Exhibits.**

10.30 **a.m.**
Presiding: Dr. C. B. Stewart, Winnipeg, Man., Canada.
Secretary: Dr. J. T. MacDougall, Winnipeg, Man., Canada.

10.30 **"Bladder Complications due to Large Bowel Pathology,"**
Dr. G. J. Thompson, Rochester, Minnesota, U.S.A.

10.50 **"The Surgical Treatment of Acute Arterial Thrombosis in the Lower Extremity,"**
Dr. H. P. Totten, Philadelphia, Pennsylvania, U.S.A.

11.10 **"Blood Volume and Its Importance in Surgery,"**
Dr. M. Sadove, Chicago, Illinois, U.S.A.

11.30 **"How to Prevent Non-Union or Delayed Union in Fractures,"**
Dr. E. L. Compere, Chicago, Illinois, U.S.A.

Noon

12.00 **Luncheon:**
Dr. Hugh Saunderson, Winnipeg, Manitoba, Canada, President of the University of Manitoba.
Dr. A. A. Klass, Winnipeg, Manitoba, Canada.

Afternoon

2.00 **Sectional Meetings.**

E. E. N. T. PROGRAM

General Chairman: Dr. Arnold Grossman, Montreal, Quebec, Canada.
Dr. Henry M. Scheer, New York City, New York, U.S.A.
Local Chairman: Dr. Maurice M. Pierce, Winnipeg, Manitoba, Canada.
Secretary: Dr. R. M. Ramsay, Winnipeg, Manitoba, Canada.

SCIENTIFIC PROGRAM

Thursday, September 29th, 1960

2.00 "Assessment of Various Stages and Operative Techniques for Otosclerosis,"
Dr. Samuel Rosen, New York City, New York, U.S.A.
Discussion to be opened by Dr. M. M. Pierce, Winnipeg, Manitoba, Canada.

2.40 "Review of the Literature on Serous Otitis Media in Children,"
Dr. Louis Savitt, Chicago, Illinois, U.S.A.

3.10 "The Radiological Diagnosis of Otolaryngologic and Ophthalmologic Facial Trauma,"
Dr. Everett F. Crutchlow, Montreal, Quebec, Canada.

3.40 Symposium on "Congenital Glaucoma and Cataracts,"
Moderator: Dr. Oscar B. Nugent, Chicago, Illinois, U.S.A.

1) Dr. Girolomo Bonaccolto, New York City, New York, U.S.A.
2) Dr. R. M. Ramsay, Winnipeg, Manitoba, Canada.
3) Dr. Howard Reed, Winnipeg, Manitoba, Canada.

ORTHOPAEDICS SECTIONAL PROGRAM

Afternoon

2.00 The Painful Hip — Symposium.
Presiding: Dr. Robert Tucker, Winnipeg, Manitoba, Canada.
Members of Panel:

1) Dr. W. B. MacKinnon, Winnipeg, Man., Canada.
2) Dr. D. M. Bruser, Winnipeg, Man., Canada.
3) Dr. Chas. Hollenberg, Winnipeg, Man., Canada.
4) Dr. Elmer James, Winnipeg, Man., Canada.

3.00 "The Use of the Knowles Pin,"
Dr. D. R. Bigelow, Winnipeg, Man., Canada.

3.20 "The Use of Staples in Limb Length Discrepancy,"
Dr. K. C. McGibbon, Winnipeg, Man., Canada.

3.40 "A Review of 250 Intertrochanteric Fractures of Femur,"
Dr. Edward Danchuk, Winnipeg, Man., Canada.

4.00 "A Review of Fractures of Tibia and Fibula" (from the Deer Lodge Hospital),
Dr. R. N. Rogue, Winnipeg, Man., Canada.

4.20 "Research Experience with Ostamer,"
Dr. Richard McComb, Winnipeg, Man., Canada.

UROLOGICAL SECTIONAL PROGRAM

Presiding: Dr. C. B. Stewart, Winnipeg, Man., Canada.
Secretary: Dr. David Swartz, Winnipeg, Man., Canada.

ANAESTHESIOLOGY PROGRAM

Presiding: Dr. Max Minuk, Winnipeg, Man., Canada.
(program not completed).

OBSTETRICS AND GYNAECOLOGY PROGRAM

Presiding: Dr. Elinor Black, Winnipeg, Man., Canada.
(program not completed).

SESSIONS FOR SURGICAL NURSES

Wednesday, September 28th, 1960

Mezzanine Floor

Presiding: Miss Pettigrew.

Morning

9.00 Greetings and Address.

"Orthopedic Surgery and the Role of the Operating Room Nurse,"
Dr. Edward L. Compere, Chicago, Illinois, U.S.A.

Questions and Discussion.

10.00 "Surgery of the Colon,"
Dr. John B. O'Donoghue, Chicago, Illinois, U.S.A.

Questions and Discussion.

11.00 Topic
Dr. Lyon Appleby, Vancouver, British Columbia, Canada.

Questions and Discussion.

Afternoon

2.00 "Surgery of Peptic Ulcer,"
Dr. S. S. Peikoff, Winnipeg, Man., Canada.

Questions and Discussion.

FILM PROGRAM

CS-668 Vagotomy, Pyloroplasty, and Supra-Antral Segmental Gastrectomy for Duodenal Ulcer.
Clarence J. Berne and Wm. O. Mikkelsen.
Color and Sound—34 minutes. Released 1957.

CS-790 Caudal Pancreatico-Jejunostomy for Chronic (relapsing) Pancreatitis.
John A. Schilling.
Color and Sound—24 minutes. Released 1958.

CS-775 Safe and Conservative Treatment of Lesions of the Female Breast.
W. Emory Burnett.
Color and Sound—32 minutes. Released 1958.

CS-784 The Surgical Treatment of Pancreatic Pseudocysts.
David M. Hume.
Color and Sound—37 minutes. Released 1958.

Thursday, September 29th, 1960

Evening

8.00 Manitoba Medical Association Dinner and Dance

THE NEW

HERISAN ANTIBIOTIC *Ointment*

a specific treatment for pyogenic dermatoses, infected, degenerated or damaged tissues and other skin conditions, embodies the medicinal marriage of...

Bacitracin-Tyrothricin-Neomycin

whose bacteriocidal and bacteriostatic action is significantly increased by their marked synergistic action in combination (as shown by Lubowe) but which possess a low sensitizing power and toxicity permitting prolonged usage without untoward effects when applied topically.

With Herisan

a long established, scientifically proven medication supplying Natural Vitamins A & D; the essential nutrients for tissue repair and accelerated healing; in the optimal ratio of 8:1 contained in a precisely balanced, readily absorbed base which ensures maximum effect of the active ingredients.

Therefore, the NEW Herisan Antibiotic Ointment (1) provides a high level antibiotic action with low dosages of Bacitracin, Tyrothricin and Neomycin due to their marked synergistic action in combination, (2) has a low toxicity rating, (3) has a low sensitizing power, (4) is effective in the presence of blood, pus, plasma, necrotic tissue and penicillinase, (5) stimulates the formation of granulation tissue, (6) ensures rapid healing and thus treatment is of shorter duration.

Over half a century of devotion to medical and pharmaceutical advance in Canada

Winnipeg Medical Society Committee Reports 1959 - 1960

Committee Reports 1959 - 1960

Secretary's Report

To the President and Members of
The Winnipeg Medical Society:

The first meeting of the Council of the Society was held on June 9, 1959, and regular monthly meetings were begun on September 21, 1959, and were held monthly thereafter, under the chairmanship of Dr. Dwight Parkinson. Nine general meetings were held during the year. Attendance at the meetings was felt to have improved somewhat in the past year, and the place of meeting has been changed from the large auditorium to the lecture theatre "A" in the Winnipeg Medical College. The Society was fortunate in having excellent local and visiting speakers at their meetings during the year.

One of the factors which is probably an aid in securing increased attendance is the practice of opening and adjourning the meeting exactly on time, and confining the program to one or two short subjects, rather than long dissertations. There is as yet, no one answer to the cause of a relatively small attendance but strenuous efforts are being made to make the meetings as attractive and as pleasing as possible.

During the past year, the Society lost, thorugh death, the following members: Dr. M. M. Brown, Dr. W. E. Campbell, Dr. D. F. McRae, Dr. A. T. Mathers, Dr. M. R. Mathers, Dr. F. S. MacDonald, Dr. E. G. Hollenberg.

It would have been quite impossible to carry on accurate records of the meetings and the executive meetings, without the expert help of Dr. M. T. Macfarland, Miss Graham, and the office staff of the Manitoba Medical Association. Our Society owes them a great debt for the invaluable assistance they have given to us.

Respectfully submitted,

J. T. MacDougall,
Secretary.

Auditor's Report
Treasurer

May 3, 1960.

To the Members,
The Winnipeg Medical Society,
Winnipeg, Manitoba.

In accordance with your instructions we have examined the accounts of

THE WINNIPEG MEDICAL SOCIETY
— and —
THE WINNIPEG MEDICAL SOCIETY
LIBRARY FUND

for the fiscal year ended April 30, 1960, and have prepared therefrom and submit herewith the following financial statements for your consideration:

Exhibit A — Balance Sheet, as at April 30, 1960
Exhibit B — Statement of Revenue and Expenditure

We report thereon as follows:

Balance Sheet

Cash on Hand and in Bank:

Cash on hand was verified by actual count as at date of audit. Cash on deposit in General and Library Fund Accounts was verified by correspondence direct with The Toronto-Dominion Bank, Portage and Edmonton Street Branch, Winnipeg.

Fees Receivable:

This item represents membership fees unpaid at the fiscal year-end, as shown by the records of the Society, as follows:

1958-59 Membership Fees	$12.00
1959-60 Membership Fees	69.00
	$81.00

The unpaid balances have not been verified by correspondence with the members concerned.

Investments in Bonds:

The investments of the Society as at April 30, 1960, were as follows:

Government of Canada:	Cost	Par Value	Approximate Market Value
3¾%, due 1978	$1,473.75	$1,500.00	$1,233.75
3¼%, due 1979	1,003.75	1,000.00	762.50
4½%, due 1983	3,031.88	3,000.00	2,677.50
The Hydro Electric Power Commission of Ontario:			
5%, due 1976	1,005.00	1,000.00	940.00
	$6,514.38	$6,500.00	$5,613.75

All of the foregoing investments, held in a safety deposit box in The Toronto-Dominion Bank, were produced for our examination and in all cases are fully registered in the name of The Winnipeg Medical Society.

Accounts Payable:

Reasonable care was exercised by us to insure that the attached Balance Sheet properly reflects all known liabilities of the Society as at April 30, 1960.

Membership Fees Paid in Advance:

This item represents 1960-61 membership fees received prior to April 30, 1960.

Statement of Revenue and Expenditure

The operations of the Society for the fiscal year resulted in a net revenue of $889.93 on the General Fund Account and net expenditure of $135.78 on Library Fund Account. Full details are set forth on Exhibit B attached.

Revenue from membership fees is in accordance with your records, supported by duplicate receipts which were examined by us. All interest has been accounted for on a received basis.

All expenditures for the fiscal year have been approved in minutes of Council, and adequate vouchers were examined by us in support thereof.

* * *

We record with pleasure our appreciation of the courtesies and co-operation extended to us by Council members and staff during the course of our examination. Should any further information or explanations be required in connection with the attached accounts we shall be glad to be of service.

Auditors' Certificate

We have examined the balance sheets of The Winnipeg Medical Society and The Winnipeg Medical Society Library Fund as at April 30, 1960, together with the related statements of revenue and expenditure for the fiscal year ended that date, and have obtained all the information and explanations we have required.

In our opinion, the attached balance sheets and statements of revenue and expenditure are properly drawn up so as to exhibit a true and correct view of the state of the affairs of the Society as at April 30, 1960, and the results of its operations for the fiscal year then ended, according to the best of our information and the explanations given to us and as shown by the books of the Society.

Yours faithfully,
SILL, STREUBER & COMPANY,
Chartered Accountants.

EXHIBIT A

Balance Sheet
As at April 30, 1960
ASSETS

	General Fund	Library Fund
Cash on Hand and in Bank	$3,028.14	$3,055.64
Membership Fees Receivable	81.00	

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are minutely standardized, uniformly controlled and biologically adjusted — in-practice-proven assurance of the results you want at reasonable cost to your patients.

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Combined estrogen-androgen — additive relief for menopausal women
GYNETONE Repetabs (ethinyl estradiol with methyltestosterone)
GYNETONE injection (estradiol benzoate with testosterone propionate)

Specific androgen therapy—for the elderly and in the male climacteric
ORETON (testosterone) oral, injection, pellets

Estrogens — for the female climacteric
ESTINYL (ethinyl estradiol) tablets

Progestins—in habitual abortion, dysmenorrhea and premenstrual tension
PRANONE (ethisterone) tablets
PROLUTON (progesterone) injection, buccal tablets

Schering
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Investments — at cost:		
Government of Canada Bonds	5,509.38	
Hydro-Electric Power Commission of Ontario Bond	1,005.00	
	$9,623.52	$3,055.64

LIABILITIES

Accounts Payable	$ 78.50	
Membership Fees Paid in Advance	10.00	
	$ 88.50	
Surplus:		
Balances as at May 1, 1959	$8,645.09	$3,191.42
Net Revenue *Expenditure* for fiscal year ended April 30, 1960 (Exhibit B)	889.93	*135.78*
Balances as at April 30, 1960	$9,535.02	$3,055.64
	$9,623.52	$3,055.64

EXHIBIT B

Statement of Revenue and Expenditure
For twelve months ended April 30, 1960
General Fund

Revenue:		
Membership Fees:		
Active Members	$4,141.00	
Non-residents and Associates	6.00	$4,147.00
Bond Interest		273.74
		$4,420.74
Expenditure:		
Audit Fees	$ 75.00	
Bank Charges, including Safety Deposit Box Rental	5.95	
Catering Expense	330.65	
Donations — Sundry	12.00	
Grant — Library Fund	1,000.00	
General Expenses	18.62	
Lantern Slides and Expense	50.00	
Manitoba Medical Association — Share of office salaries and expense	1,320.00	
Printing, Postage and Stationery	618.59	
Speaker's Expenses	100.00	3,530.81
Net Revenue for Year (Exhibit A)		$ 889.93

Library Fund

Revenue:		
Bank Interest	$ 49.85	
Grant — General Fund	1,000.00	$1,049.85
Expenditure:		
Books and Periodicals Purchased	$ 729.98	
Library Supervision	455.65	1,185.63
Net *Expenditure* for Year (Exhibit A)		$ *135.78*

Community Chest

To the President and Members of
The Winnipeg Medical Society:

The Community Chest campaign for the year 1959 was almost a success. The medical group donated 97.5% of its quota; a sum of $23,566.00. This exceeded the previous year's donation of $22,798.00 but an increase in the quota was a stumbling block.

This year 369 out of 554 doctors contributed. It is strange that only 66% of our colleagues feel that there is a common community need for charitable funds, however, this appears to be the usual figure.

The record shows that we have an unenviable standing in the professional group.

Lawyers	107%
Dentists	102%
Others	102%
Doctors	97.5%

This is regrettable and a matter which could be so easily corrected if even a small number of the 185 who did not donate, would do so.

I have extended to Mr. R. Pedrick and his associates our thanks for carrying out the canvass for our group. We have in turn been thanked by the Chairman of the convass for our donations and co-operation.

Respectfully submitted,

W. J. Hart,
Representative.

Library

To the President and Members of
The Winnipeg Medical Society:

As your representative on the Medical Library Committee, I beg to submit the following report for the year 1959-60. In the fall of 1959 I attended a meeting of the Medical Library Book Selection Committee at which approximately $1,000.00 was approved for new books.

The annual grant of $1,000.00 was paid to the Library Fund in the fall of 1959.

The following is a brief summary of activities and expenditures which was prepared by Miss Cynthia Roblin, medical librarian, for the society's information:

	1958-1959	1959-1960
EXPENDITURES:		
Books—Estimated	$500.00	$ 300.00
Spent	445.72	On order
Binding—Estimated	500.00	1,000.00
Spent	169.65	In process
Evening hours—Estimated	236.00	236.00
Spent (February to May)	236.00	236.00
BOOK DISPLAYS:		
Presented before meetings of the Society	6	5
BORROWERS:		
Registered physicians in Winnipeg	736	754
Registered borrowers among registered physicians	258	321
Items borrowed	8,247	12,206
MEDICAL LIBRARY COMMITTEE:		
Full committee meetings	2	2
Book committee meetings	2	2

Respectfully submitted,

D. Pearlman,
Representative.

Membership

To the President and Members of
The Winnipeg Medical Society:

Membership in the Society is as follows:

Active paid-up members		385
Active paid-up members (half rate)		44
Associate or Non-resident members		3
New members	20	
Total paid-up members		432
Life membership		32
Free membership (over 65)		28
Non-active		4
Membership fees unpaid		9
		505

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All Iron Deficiency Anaemias

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- **Quickest Haemoglobin Response from Oral Iron**
- **Lowest Toxicity**
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- **Therefore, Low Cost over Treatment Period**

CEREVON was developed in our own Research Laboratories and has been fully demonstrated to have a superior clinical and haematological response in the treatment of iron deficiency anaemias of pregnancy, infancy and all iron deficiency states.

Readily absorbed, CEREVON has by far the highest utilization co-efficient of the various iron salts available and does not give rise to irritation of the intestinal mucosa.

Literature and samples gladly supplied on request.

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Each capsule/tablet/teaspoonful contains
Ferrous Succinate—150 mg

CEREVON 'B' CAPSULES, TABLETS AND ELIXIR
Each capsule/tablet/teaspoonful contains
Ferrous Succinate—150 mg
Thiamine Hydrochloride—1 mg
Riboflavin—1 mg Niacinamide—10 mg

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CL3-59

Twenty-one members were lost to the Society in the past year. Seven by death, one resigned, and fourteen have moved out of the district.

In spite of the number leaving this area the Society's membership increased by twenty.

Respectfully submitted,

John A. Swan,
Chairman.

Legislation

To the President and Members of
The Winnipeg Medical Society:

During the past year no matters have been considered by the committee and no meetings have been held.

Respectfully submitted,

A. B. Houston,
Chairman.

Program

To the President and Members of
The Winnipeg Medical Society:

During the year 1959-60, the following meetings of the Winnipeg Medical Society were held. The titles and speakers were as follows:

SEPT. 25, 1959:
"Complications of the Third Stage of Labour"
Dr. A. W. Andison, Winnipeg.

OCT. 16, 1959:
Movie: "William Harvey and the Circulation of the Blood."
Topic: "Experience with Fifty Cases of Mitral Valvotomy."
Dr. L. L. Whytehead, Winnipeg.

NOV. 20, 1959:
"Thyroid Disease"
Dr. George Crile, Jr., Cleveland.

DEC. 11, 1959:
"Blood Lipids in Atherosclerosis — Facts and Fancy"
Dr. W. F. Perry, Winnipeg.

JAN. 15, 1960:
"Presentation of Cases"
Staff of Deer Lodge Hospital.

FEB. 19, 1960:
"Some Aspects of Insurance Medicine"
Dr. F. A. L. Mathewson
Mr. J. E. Morrison
Dr. J. P. Gemmell
Dr. F. H. Smith, Winnipeg.

MAR. 24, 1960:
"Early Recognition of Surgical Emergency in the Newborn"
Dr. Tague Chisholm, Minneapolis.
"Diffuse Renal Diseases in Childhood"
Dr. R. A. Good, Minneapolis.

APRIL 14, 1960:
The General Practitioners' Association of Manitoba
Panel Discussion: "Athletic Injuries"
Chairman: Dr. R. Jacques
Panel: Dr. M. Avren
Dr. J. Waugh
Dr. B. Derback
Dr. E. Kent

Respectfully submitted,

J. P. Maclean,
Chairman.

Public Health

To the President and Members of
The Winnipeg Medical Society:

As there were no meetings of the Standing Committee on Public Health of the Winnipeg Medical Society, there is nothing to report.

Respectfully submitted,

R. G. Cadham,
Chairman.

Public Relations

To the President and Members of
The Winnipeg Medical Society:

There has been an increased interest and awareness of members concerning public relations, and of notifying your Committee of various talks to the medical audiences.

Respectfully submitted,

C. Derksen,
Chairman.

Trustees

To the President and Members of
The Winnipeg Medical Society:

As Senior Trustee, I wish to report the following securities as being held in the Safety Deposit Box, Toronto-Dominion Bank, 394 Portage Avenue, as inspected by Dr. D. L. Kippen and Dr. S. S. Berger.

Three Government of Canada Bonds, 4½% maturing 1983 — each $1,000.00	$3,000.00
Three Government of Canada Bonds, 3¾% maturing 1978 — each $500.00	1,500.00
One Government of Canada Bond, 3¼% maturing 1979 — at $1,000.00	1,000.00
One Hydro Electric Power Commission of Ontario Bond, 5% maturing 1976 — at $1,000.00	1,000.00
Total	$6,500.00

Respectfully submitted,

D. L. Kippen,
Chairman.

Welfare Council

To the President and Members of
The Winnipeg Medical Society:

Your representative was elected chairman of the Health Division, Welfare Council of Greater Winnipeg in September, 1959. The Health Division presented a series of presentations on the subject of rehabilitation of the physically handicapped in Greater Winnipeg. Major voluntary and governmental agencies concerned with rehabilitation of physically handicapped people presented to the Health Division an outline of their organization, terms of reference and modus operandi. This series of meetings, two per month ran through until the end of February, 1960. They were well attended, well received and served the purpose of improved liaison between these organizations.

Your representative attends the meetings of the Directors of the Welfare Council of Greater Winnipeg in his capacity as Chairman of the Health Division. The activities of this body are not of specific interest to the medical profession. Your representative does feel that the initiative of this body in promoting the Indian, Metis Conferences is to be highly commended. This year's conference was much more successful than the initial conference last year in that the Indian and Metis came prepared to speak up and were given an opportunity to do so where as in the initial conference they sat and listened to people who did not understand their problems for a large part of the time.

The Health Division of the Welfare Council was invited to meet with Dr. Willard of the Hospital Survey Board. The chief recommendation to come out of this meeting was that the role of the Medical Social Service Department is becoming increasingly important in our hospitals and can be useful in modifying and diverting pressures on bed occupancy in active treatment hospitals. The Health Division are subsequent to this meeting recommending that the Manitoba Hospitals Commission may be well advised to considering securing the services of a consultant Medical Social Service Worker. To include in their special services division.

Respectfully submitted,

P. K. Tisdale,
Representative

when emotional turbulence threatens medical or surgical care

Fear, agitation, and resistance often hinder medical diagnosis and treatment.

SPARINE alleviates agitation, overcomes resistance, placates fears.

In addition to calming the patient, SPARINE controls other interfering symptoms: nausea, vomiting, and hiccoughs.

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Anaesthesia

To the President and Members of
The Winnipeg Medical Society:

I am pleaesd to report on the Winnipeg Anaesthetists' Society activities for the 1959-60 season as follows:

JUNE, 1959:

The Anaesthetic Planning Committee of the Winnipeg Anaesthetists' Society met to review developments in the negotiations for a new fee schedule; also to study the Botterell Report on the future of certification and to report our reactions to same, to the Committee on Examinations of the Canadian Anaesthetists' Society.

JULY, 1959:

Developments in the fee schedule negotiations were again reviewed and the program for the 1959-60 season were drawn up.

OCTOBER, 1959:

Dr. Gordon Wyant of Saskatoon spoke on Azeotropic Fluothane Ether Anaesthesia at our dinner meeting.

NOVEMBER, 1959:

A seminar on Pulmonary Disease in Anaesthesia with Dr. D. Snidal as guest panelists was held. Dr. P. G. McGarry and Dr. G. Ross participated.

DECEMBER, 1959:

Dinner dance at Club Morocco.

JANUARY, 1960:

Dr. McCaughey spoke on Muscle Relaxants. Dr. Mark Nickerson acted as moderator of the ensuing discussion.

FEBRUARY, 1960:

Two films of great medical interest were shown at this meeting. The first, a documentary, outlining operation of the National Health Plan in Britain during its 10th year of operation. The other "Medical Witness" — produced by co-operation of the American Bar Association and the A.M.A. — outlining proper (and improper) conduct of the doctor in the courtroom.

MARCH, 1960:

Interesting and instructive anaesthetic problem cases were presented by Drs. Zaycew, Bennett, Camrass and Wolkenstein.

APRIL, 1960:

Dr. S. Kantor reviewed his work in the Differential Cooling of the Brain in 70 dogs. His collaborator, Dr. Zingg, led the ensuing discussion.

Dr. Natsuk presented tape recordings by Dr. Morris on "Resistance in Anaesthesia Equipment" and by Dr. Harold Griffiths on the "Place of Fluothane in Present Day Anaesthesia and its Possible Future."

MAY, 1960:

This, our final dinner meeting, will be addressed by Dr. Robert Smith of Boston.

Respectfully submitted,

J. McCammon,
Secretary-Treasurer.

Internists

To the President and Members of
The Winnipeg Medical Society:

The officers of this section for the 1959-60 session were Dr. J. Hildes, President; Dr. J. E. Morriss, Program Chairman; Dr. J. A. Moorhouse, Secretary. The section held five scientific meetings at which the following papers were heard and discussed:

1. The physiology of connective tissue. Dr. J. H. Kellgren, Professor of Rheumatology, University of Manchester.
2. Physiological amines and their clinical syndromes. Dr. P. Hagen, Professor of Biochemistry, University of Manitoba.
3. Recent advances in bilirubin metabolism. Dr. B. B. Fast, Winnipeg.
4. What we have learned from percutaneous renal biopsies. Dr. R. M. Kark, Professor of Medicine, University of Illinois.
5. Assessment and management of respiratory insufficiency. Dr. M. Campbell, Middlesex Hospital, England.

In addition, a general business meeting was held to discuss the California Relative Value Index as it applies to the practice of Internal Medicine. A committee was appointed which later presented the views of the section to the Professional Policy Committee of the Manitoba Medical Association.

Respectfully submitted,

John A. Moorhouse,
Secretary.

General Practice

To the President and Members of
The Winnipeg Medical Society:

The following is a summary of the activities of the General Practitioners' Association of Manitoba for the year 1959-60. The Executive of this association met on the third Tuesday of each month, with several extra meetings called.

The annual dinner meeting was held October 6, 1959. Subsequent executive meetings have been concerned with the professional policy committee, also, a brief regarding coroners' fees. These are to be presented to the M.M.A.

A memorandum concerning the Columbus Plan was presented by Dr. Malkin, to the M.M.A. at their last general meeting.

The Annual Valentine's Dinner and Dance was held Feb. 14, 1959, and was enjoyed by all who attended.

G.P.A.M. will present a program at the Winnipeg Medical Society meeting on April 15, 1960.

Respectfully submitted,

G. Kristjansson,
Secretary.

Medical History

To the President and Members of
The Winnipeg Medical Society:

This section has held only two meetings to date, both at the Medical Arts Clubrooms, each preceded by a dinner.

The first meeting was held in December, and the speaker of the evening was Dr. J. F. Edwards who gave an entertaining discourse on "The History of Hypnosis."

The second meeting was held in April, addressed by Dr. Harry Medovy. He gave an exceedingly entertaining and scholarly discourse on "The Physician in Grand Opera."

Dr. L. A. Sigurdson, President of the Society, presided at the meetings and the usual members were in attendance.

It should be remembered that all members of the Winnipeg Medical Society are members of the Historical Society without additional dues and any would be welcome at these very fascinating meetings.

Respectfully submitted,

Dwight Parkinson,
Secretary.

Radiology

To the President and Members of
The Winnipeg Medical Society:

During the year the Section of Radiology met on two occasions to discuss matters of current interest.

Respectfully submitted,

J. B. Squire,
Chairman.

Executive Committee

To the President and Members of
The Winnipeg Medical Society:

As representatives to the Executive Committee of the Manitoba Medical Association Dr. Cooke and I have attended the regular meetings and reported all pertinent information back to the Council.

Respectfully submitted,

Dwight Parkinson,
President

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Eye, Ear, Nose and Throat

To the President and Members of
The Winnipeg Medical Society:

During the year 1959-60 our Section had three general meetings. Dr. T. P. Kearns of Rochester, Minn., gave a well received lecture illustrated by a film on "Neurologic anomalies of the extra-ocular muscles." Early this year Drs. J. C. Wilt and W. L. Parker discussed the trends of virus diseases in Manitoba in 1959. During May and June the members volunteered their services in performing tonometry on 5,200 persons at Glaucoma Days sponsored by the Lions Club of Winnipeg.

Respectfully submitted,

G. Letienne,
Secretary.

Representative to the Manitoba Medical Review

To the President and Members of
The Winnipeg Medical Society:

At this time I would like to thank the Executive for the opportunity of learning about the workings of the Winnipeg Medical Society. Although the contribution from this department has been small, two projects have been my concern:

(1) The stimulation for more papers from Doctors of Winnipeg for publication locally. This has been on a personal basis.

(2) A presentation of the role of Winnipeg as a research centre. Most of the data has been collected, and should be ready for publication shortly.

It would seem of definite advantage that my successor be detailed specifically on his duties for next year. The monthly reporting of the procedures of the Winnipeg Medical Society should be included in the Manitoba Medical Review. Definite topics, to give incentive and direction to those interested in producing medical research and literature, should be discussed early in the year — suitable material for reporting and publication.

Respectfully submitted,

Harold L. Davies,
Representative.

Obstetrics and Gynaecology

To the President and Members of
The Winnipeg Medical Society:

Five meetings of the Section were held in the past year. Four were dinner meetings. The following papers were presented:

1. Dr. Elinor Black — A Travelogue about her Asian tour.
2. Dr. A. Zipursky — Studies of Foetal Cells in the Maternal Blood.
3. Dr. Ross Mitchell — Obstetrics and Gynaecology in early Winnipeg.
4. Dr. Arthur Sutherland — Placentography.

The final meeting was a reception and dinner at the Fort Garry Hotel in honor of Dr. Arthur Sutherland of Glasgow.

The Scientific papers are being included in the record of the proceedings of the Section.

Respectfully submitted,

A. A. Earn,
Secretary.

Paediatrics

To the President and Members of
The Winnipeg Medical Society:

The Paediatrics Section held a meeting in December, 1959, to discuss the relative fee schedule and also to hold election of officers.

The following were elected:
Chairman: Dr. D. Besant
Secretary: Dr. K. Wylie

Dr. W. Bowman was appointed observer for the Section of Paediatrics.

Respectfully submitted,

K. O. Wylie,
Secretary.

Notice of Motion

THAT the By-laws of the Society be amended as follows: Chapter XI, Section 1 — Date of Meetings — delete the name of the month "May" where it appears on the second last line and insert "April" therefor. The sentence will then read. "The stated meeting in April shall be the Annual Meeting for the election of officers and other business."

AND THAT Chapter V, Section 3 — Time of Election — be amended to read "The Officers of the Society shall be elected at the Annual Meeting in April."

AND FURTHER THAT Chapter IX, Section 3—Auditor —be amended to read "At the stated meeting in March the President shall appoint a chartered accountant to audit the books of the Society at the end of the official year."

Moved by Dr. J. L. Downey,
Seconded by Dr. D. L. Kippen.

Election Results — 1060-61

President	Dr. R. L. Cooke
Vice-President	Dr. J. T. MacDougall
Secretary	Dr. T. W. Fyles
Treasurer	Dr. A. B. Houston
Trustee	Dr. J. W. Whiteford

THE ANNUAL MEETING OF THE

MANITOBA MEDICAL ASSOCIATION

(Canadian Medical Association, Manitoba Division)

will be held on

SEPTEMBER 26th and 27th, 1960

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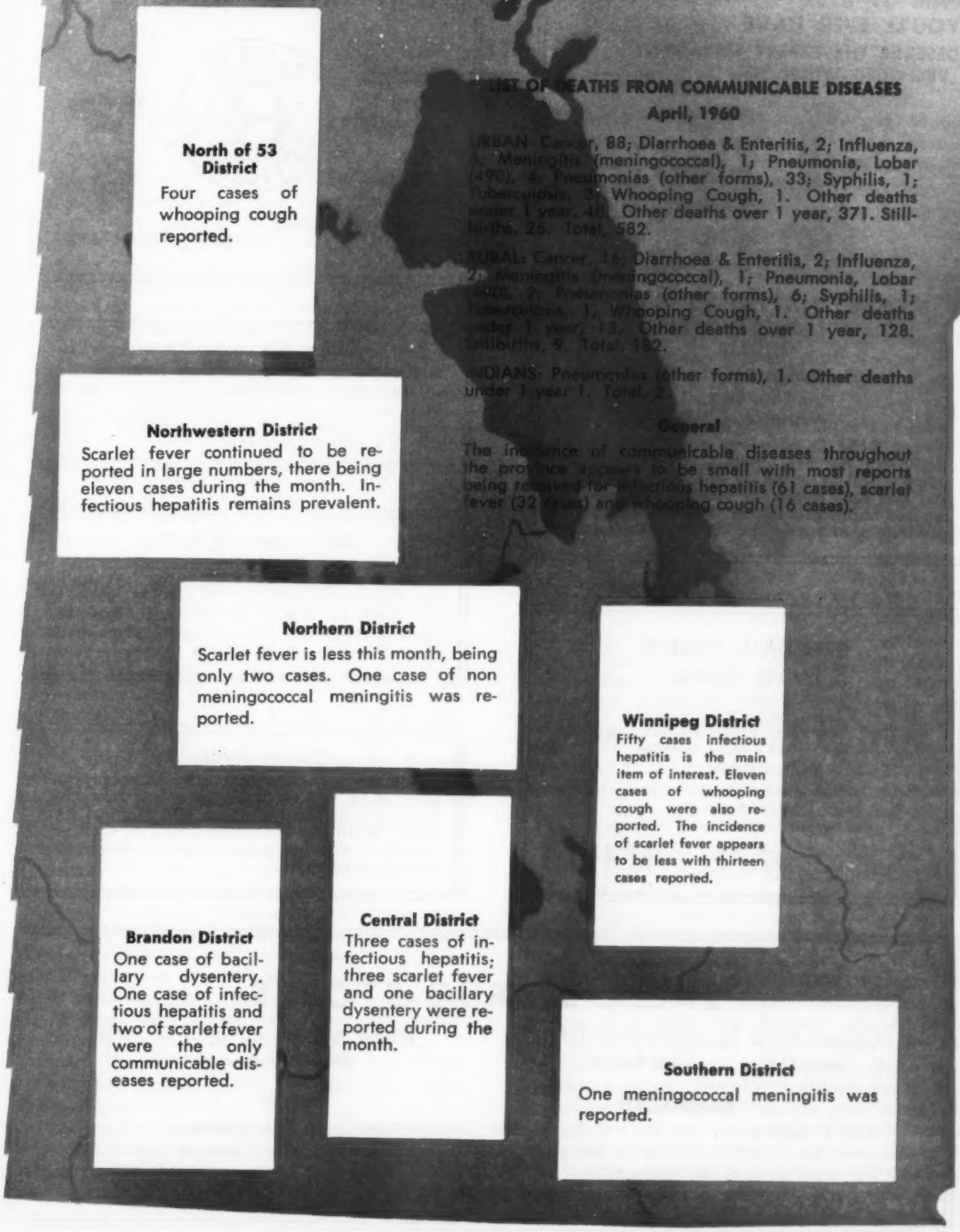
COMMUNICABLE DISEASE PICTURE



North of 53 District

Four cases of whooping cough reported.

Northwestern District

Scarlet fever continued to be reported in large numbers, there being eleven cases during the month. Infectious hepatitis remains prevalent.

Northern District

Scarlet fever is less this month, being only two cases. One case of non meningococcal meningitis was reported.

Winnipeg District

Fifty cases infectious hepatitis is the main item of interest. Eleven cases of whooping cough were also reported. The incidence of scarlet fever appears to be less with thirteen cases reported.

Brandon District

One case of bacillary dysentery. One case of infectious hepatitis and two of scarlet fever were the only communicable diseases reported.

Central District

Three cases of infectious hepatitis; three scarlet fever and one bacillary dysentery were reported during the month.

Southern District

One meningococcal meningitis was reported.

LIST OF DEATHS FROM COMMUNICABLE DISEASES

April, 1960

URBAN: Cancer, 88; Diarrhoea & Enteritis, 2; Influenza, 5; Meningitis (meningococcal), 1; Pneumonia, Lobar (490), 4; Pneumonias (other forms), 33; Syphilis, 1; Tuberculosis, 3; Whooping Cough, 1. Other deaths under 1 year, 48. Other deaths over 1 year, 371. Stillbirths, 25. Total, 582.

RURAL: Cancer, 16; Diarrhoea & Enteritis, 2; Influenza, 2; Meningitis (meningococcal), 1; Pneumonia, Lobar (490), 2; Pneumonias (other forms), 6; Syphilis, 1; Tuberculosis, 1; Whooping Cough, 1. Other deaths under 1 year, 13. Other deaths over 1 year, 128. Stillbirths, 9. Total, 182.

INDIANS: Pneumonias (other forms), 1. Other deaths under 1 year 1. Total, 2.

General

The incidence of communicable diseases throughout the province appears to be small with most reports being received for infectious hepatitis (61 cases), scarlet fever (32 cases) and whooping cough (16 cases).

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